

How can oral language impact on literacy acquisition?

The study of an oral language intervention program
with preparatory students in Tasmania.

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DECLARATION

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ABSTRACT

The purpose of this study was to collect and evaluate reading and writing data related to an oral language intervention program being trialled in two rural schools in north western Tasmania. Two other schools, within ten kilometres, were used as control examples, to determine the effect of the variables and attributes of the intervention program. Prior to this study, school leaders monitoring kindergarten and preparatory student data noted a trend. Early years' students showed declining literacy scores on state-wide assessments. The Tasmanian Educational Performance Services (EPS) state-wide Reading Recovery data also indicated that fewer preparatory students were reading and writing, at an age-appropriate level, as they began Grade one.

A multi-method research approach was conducted with twelve preparatory students from each of two intervention and two non-intervention schools, using standard classroom assessment tools to monitor student outcomes. Questionnaires were used with teachers and caregivers, consisting of demographic, Likert scale and open-ended questions. Semi-structured interviews were used to build on quantitative student data and establish a thorough understanding of other issues impacting on student outcomes. The study period was approximately six months, in the second half of the preparatory year. The aim was to determine if the chosen intervention program, Albany District Oral Language Focus (ADOLF) led to measureable improved student outcomes in oral language, reading and writing.

This research indicated that all study students, whether classified as 'average' or 'at risk' made gains in some or all of the oral language, reading or writing assessment tools. There was no notable gain to student outcomes at intervention schools for those students of most concern. Teachers indicated that the focused intervention program on questioning developed a culture of questioning and inquiry throughout the preparatory classroom program. Teacher awareness and skill in using questioning was noted as developing and extending student vocabulary as well as supporting the increased time for focused interactions during classroom activities.

This thesis attempts to understand oral language learning opportunities, arising from the ADOLF intervention, with the preparatory students participating in this study and the teaching practices that supported them as early readers and writers. Other factors, beyond the school, were considered for their impact on early literacy learning, in relation to improving student outcomes. Nevertheless, this research resulted in further questions being raised for future data collection, review of appropriateness assessment tools and research to be undertaken.

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Chapter One

Introduction

1.1 Background and Aims

In 2006, using data from the Kindergarten Development Check (KDC) (DoE, 2007) and Performance Indicators in Primary Schools (PIPS), the average reading and writing performance of preparatory and Grade one students in North West Tasmanian schools had been identified as lower than expected by Tasmanian Department of Education (DoE) state-wide assessments. Data collected over four years prior to this study indicated that there were increasing numbers of early years students requiring intervention by speech pathologists and early literacy intervention (Reading Recovery Tasmania) teachers (DoE, 2009).

On the basis of these data this study aimed to explore the relationship between early reading and writing progress and oral language in four rural Tasmanian schools. Two schools included in this study were already addressing school leadership concerns with low early years' learning indicator scores, the KDC. These two schools had employed an oral language teacher to work with targeted grade levels or students on an early intervention basis. For the purposes of this study, two other schools were included: one for comparisons with its oral language approach and one as a 'control' school, where no special intervention program had been adopted.

The need for early intervention is not unique to north west Tasmania, the state government's Department of Education data has shown a persistent decline in speaking and listening, understanding and problem solving, personal and social development. This study focuses on four schools, in the north west of the state in

Learning Services North West (LSNW, Appendix C), where there is a broad socio-economic mix within the rural community. While some current research from other Australian states may reflect the Tasmanian demographics, it provided a somewhat different profile due to the unique social and cultural characteristics as well the level of community access to resources.

The data collected and analysed during this study also aimed to provide direction to classroom practitioners, school administrators, professional learning facilitators and policy makers. It was hoped that the outcome of this study might result in a higher educational value being placed on speaking and listening in the classroom, encouraging the need to engage in explicit teaching of oral language skills to increase the quality of interactions and may extend the students' vocabulary and power to express thoughts in language.

This study also provided an opportunity to heighten system administrators' awareness of oral language as well as value and support the development of oral language skills. Hence, it aimed to establish a need to support schools with resource allocations, to enhance teacher professional learning and school staff resources in the early years of schooling.

The four general aims of this study were:

- To investigate the relationship between oral language and the development of reading and writing in the first year of full time schooling (preparatory year). By providing data, these will allow for the mapping of students' foundational learning over the course of one year.
- To evaluate the experiences necessary in a preparatory classroom to promote the development of oral language. In order to provide aspects of foundational

learning for reading and writing, at least to an average achievement standard, by the end of one complete year at school.

- To explore some of the most beneficial experiences that appear to be associated with the desired outcomes for students at this level of schooling.
- To explore teachers' perceptions of the role oral language plays in reading and writing development. In order to provide guidance and direction on teacher planning and preparation, teacher professional learning and classroom practice.

1.2 The Research Focus

The aim of this study was to investigate the research question: *How can oral language impact on literacy acquisition?* This was investigated by studying the role of oral language in the development of reading and writing in preparatory students in four rural Tasmanian schools. In order to ascertain the impact the following research questions were framed:

- Key Research Question 1 – What effect can an oral language intervention program have on reading and writing for preparatory students in rural Tasmanian schools?
 - Research Question 1a – What impact on reading and writing has the oral language intervention program had on 'at risk' preparatory students in rural Tasmanian schools?
 - Research Question 1b – What impact on reading and writing has the oral language intervention program had on 'average' preparatory students in rural Tasmanian schools?

- Key Research Question 2 – What other factors might affect reading and writing for preparatory students in rural Tasmanian schools?

Through addressing these questions, this study aims to add to the research in this area and identify directions for future investigation.

1.3 Research Design

This study used a multi-method research approach (Denscombe, 2007) with four different state Department of Education (public) schools in a rural area of north western Tasmania.

1.4 Overview of the Dissertation

This chapter introduces the study and describes the background, aims and research design. It cites the research questions that guide the study and outlines the remainder of the dissertation.

Chapter Two summarises the literature relevant to oral language research and its role in the development of reading and writing in the early years of schooling. It presents the theoretical understandings that form the foundation of the intervention approach used. The chapter describes those factors which might impact on oral language development and the important role that the ‘knowing other’ (e.g., teacher or adult) plays in scaffolding student literacy learning opportunities and understanding.

Chapter Three details the Albany District Oral Language Focus (ADOLF) intervention program (Reynolds, Leitaio, Souness, Durack & Ebsworthy, 1994) investigated by School A and outlines a pilot study trialled in 2007. This intervention program was then implemented in 2008 at School A for all preparatory

students and with ‘at risk’ students at School B. This initiative formed the incentive and basis of this thesis. School C used speech pathologists support and levelled ‘Blank’s questioning’ to develop their own school integrated approach. School D was aware of oral language issues but did not know about ADOLF.

Chapter Four describes the methodology used for this study, including the research approach, participants, selection and use of instruments, data collection, the limitations of this study and analysis of the data.

Chapter Five details the findings from this research. These are presented in relation to the research questions and the tools employed in the methodology. Preliminary comparisons of these data are made and an analysis of the trends highlighted by the data.

Chapter Six discusses the findings in relation to the research questions. In this chapter connections are made between the research results, the literature and the different relationships between intervention and non-intervention schools, individual school performances, including ‘average’ and ‘at risk’ students.

Chapter Seven refers to the key findings from the data to emphasise the localised conclusions. The researcher explores the implications for early years’ teachers and improving oral language, reading and writing outcomes for students along with suggestions for future research.

Chapter Two

Literature Review

2.1 Introduction

In this chapter a selection of the literature relating to the topics of oral language, reading and writing is presented. The first section defines the key terms ‘oral language’, ‘reading’ and ‘writing’ used throughout this thesis. It also reviews the work of Marie Clay and Marion Blank, as this provides the theoretical underpinning in the early literacy acquisition phase of children’s learning, drawing on oral language research (2.2). The chapter reviews the literature concerning factors that impact on children’s oral language development (2.3), along with the effectiveness of literacy teaching by examining the role of teacher understandings and practice (2.4). This section also includes a brief exploration of the role of intervention as a teaching approach, with brief considerations of more recent brain research. The chapter concludes by addressing the specific importance of the issue of oral language as children begin to read and write (2.5).

2.2 Theories underpinning the Research

2.2.1 Oral language, reading and writing.

Throughout the reviewed literature the terms oral language, reading and writing are used in a variety of ways. To clarify the underlying theoretical stance and educational perspective of this thesis, the terms used are defined.

‘Oral language’ is defined by linguists as a complex system that relates sounds to meaning and is made up of three components: phonological, semantic and syntactic

(Lindfors, 1987). The literature consistently describe children's oral language competencies as underpinning children's transition into written literacy, which in turn is a major predictor of academic achievement (Clay, 2004; Hay & Fielding-Barnsley, 2009; Hill, 2006). It is the organisation of thoughts into words that provides material to read and conversely allows our ideas to be recorded in writing. 'Talk for learning' and 'language for interaction' have a major role in the new Australian Curriculum: English to equip learners in becoming literate (Cox, 2011). Oral language also provides a foundation for teaching and learning opportunities in classrooms.

The term 'reading' in this thesis is based in Clay's (2005a) reading processing theory, where the reader's ability to integrate information from many sources, while using the concepts and conventions of print, gains the meaning of continuous text. This goes beyond the view of reading as the reader's use of visual information to decode print to achieve an accurate reading score.

Like reading, 'writing' creates meaning through text. The writer uses an idea together with prior knowledge and an understanding of how language works to encode a story. Clay emphasised the complexity of this skill and the reciprocal role of 'writing' in expressing a message in print, where the writer composes a story by, "giving attention to the message, sentence, word, letter cluster or letter-sound" (Clay, 2002, p. 20).

Once children start attending school daily, the teacher plays a key role in the learning of speaking and listening, reading and writing skills and the explicit teaching of strategic behaviours. Halliday (1979) focused on the teacher's ability to engage students in three kinds of learning, "learning of language, learning through language, learning about language" (as cited in Emmitt, Pollock, alongside Limbrick, 1996, p.

73). Teachers are in a position to provide experiences and support students as they enter the language culture of schooling (Cloonan, Essex & Raban, 1999). It becomes the teacher's responsibility to ensure that children have language learning opportunities and learn about language by using oral language for all the purposes of children's every day and school lives (Ministry of Education New Zealand, 2009).

Central to this study are the foundational experiences and understandings children require as they learn to become literate. Harrison's (2004) description of the four types of knowledge a child needs in order to read as knowledge of the world to understand texts, to know how the language works, its syntactic structures, knowledge of how texts work, the predictability of texts and finally knowledge of the conventions of print. He points out that children become familiar with the concepts of print by having books read to them (Harrison, 2004). Harrison cautions that teachers should not wait for children to acquire these four types of knowledge and he reinforces the idea that this knowledge comes from all social situations, from home, everyday life and school. He endorses "connecting new learning to children's prior knowledge, to avoid teaching the components of reading in a fragmented and incoherent way" (Harrison, 2004, p. 41) and promotes the use of nursery rhymes, action rhymes and word games as crucial elements in developing literacy. Harrison (2004) also quotes Frank Smith, "we learn to read by reading".

2.2.2 Marie Clay, literacy and learning.

The theoretical background of this study aligns with that of Dame Professor Marie Clay, where learning to read and write continuous text results from paying attention to these two activities at the same time (Clay, 2000). She asserts that the teacher can make connections between reading and writing to build prior knowledge and experiences, therefore, using reciprocal opportunities to develop skills. Clay's definitions of reading and writing processing have changed over time. Initially, she defined "reading as a message-getting, problem-solving activity, that increases in power and flexibility the more it is practised" (Clay, 2001, p. 1). In later years, she extended this definition in relation to reciprocity, describing "reading as a message-getting, problem-solving activity, and writing as a message-sending, problem-solving activity. Both activities involve linking invisible patterns of oral language with visible symbols" (Clay, 2005a, p. 1). Clay further stated that writing taught alongside reading helps build connections for the learner. This strong connection, referred to as reciprocity, has the potential for providing the learner with a context for learning and increases the opportunities the learner has to engage with text (Anderson & Briggs, 2011; Fullerton & DeFord, 2000; Gentry, 2006).

Clay's approach is based on building an effective, flexible processing system where the reader's decision making and strategic activity are strengthened with practice. Clay stresses that the learner uses a variety of ways of problem-solving as they are challenged by new texts. Interactions with, and instruction by, the teacher highlights the important aspects of reading for the beginning reader but it is the reader who is focused on active engagement in reading and making meaning. Through careful teacher decisions and minimal interactions, it is the learner who develops independence, becoming a risk-taker who is a strategic problem-solver whether

reading or writing text (Clay, 2005a). Applying strategic behaviours effectively and appropriately results from numerous, successful applications of a repertoire of strategies and are further reinforced by confirming meaning and a growing awareness of the task. Clay refers to this as the “construction of an inner control of literacy acts” (Clay, 2001).

Clay (2001; 2002; 2005a) emphasises that writing, like reading, is a complex cognitive and linguistic process. Together with Lyons (2003), through her work with “struggling” students, shows that writing is a “powerful way to teach reading”. Lyons (2003) suggests that using the two approaches together provide teachers with insight into what children are attending to in print and this deeper knowledge of the student’s processing of the information can guide teaching decisions. Writing requires developing the skill of listening to the writer’s own speech to hear the sounds that need to be recorded and then making the sound-letter relationship to write the message. The demands being placed on the early writer require explicit teaching of early learners to make the connections between what they know in reading and recognising that this will assist them in writing and vice versa. Therefore, explicit teaching of the connections they need as they learn these new skills (Clay, 2005a) can lead to accelerated learning (Anderson & Briggs, 2011).

2.2.3 Oral language, literacy and learning.

Fountas and Pinnell (2009), in detailing the essential literacy experiences for students, emphasise that the more effectively students use oral language, the more knowledge they bring to becoming literate. They stress the importance of “meaningful interactions” with adults and note that talking *to* children is not as effective as engaging in genuine conversations with them. Many factors enhance and

inhibit student learning: engagement, problem-solving, purposefulness, motivation, interaction, expectations and time are some of the factors which help children and adults learn effectively (Ministry of Education NZ, 2009). Raban's (2000) research shows that learners need to be scaffolded to new learning by someone who has greater control of the task, that is, a 'more knowledgeable other'. This insight is supported by Ministry of Education NZ (2003; 2009) and Wells (2009) where 'knowing others', such as caregivers and educators, support and extend young learners through their interactions and reformulation of conversations. Changes also occur in oral language expectations and conventions as the child moves from between home and the school context (Raban, 1999).

Interaction with others through oral language is central to learning. As children build on their prior experiences and develop their knowledge and understanding of the world, this dynamic process facilitates learning. Chomsky (1972), Bruner (1983) and other interactionists describe children as natural learners, constantly learning about their environment through interaction, exploration, trial and error and through 'having a go' when opportunities are available. Children use oral language to make sense of their world (Ministry of Education NZ, 2009). Interactions with others are of fundamental importance to children as they learn about their environment and develop through activity (Genishi & Dyson, 1984). Hill (2006) adds a social constructivist perspective by acknowledging that through interactions, children and adults discuss ideas, rehearse, build on concepts or ideas and it is through talk that ideas are generated, refined and extended. Raban (2000) concurs that it is the role of 'knowing others', whether they are parents, caregivers or teachers, to create or provide the opportunities for children to use oral language to learn. Bruner (1983) viewed young children as inherently sociable, having an inborn ability to formulate

rules, act on their physical environment and seek social interactions. Genishi and Dyson (1984) asserts that by prioritising, focusing and valuing these interactions ‘knowing others’ scaffold the learner by providing just enough help to complete a task that is otherwise too hard to do independently.

Australia’s first national Early Years Learning Framework (Australian. Government, Department of Education, Employment and Workplace Relations [DEEWR], 2009) recognise the importance of communication and language, together with social and emotional development. These learning outcomes were also central to the decision to adopt the oral language intervention program investigated in this thesis. The DoE, Early Years Learning Framework (2005) emphasise a distinction between what children understand, what they can produce in oral language as effective communicators and the priority placed on children entering schools to be ready and prepared for learning. Raban (1999) describes language as integral to all things people do, saying that it is hard to separate it as a topic of study. She explains that as language is learned “we learn how to orchestrate and control these different layers and the relationships between them to achieve our own purposes” (p. 25).

As defined by the Ministry of Education NZ (2009) “oral language underpins all learning and all social interactions” (p.7). Therefore, it follows that the ability to convey information and understand conversations are implicit for the learner. Oral language involves speaking (expressive language) and listening (receptive language) forms. The distinction between expressive language and receptive language can support or form barriers in understanding for learners (Ministry of Education NZ, 2009). A learner’s control of these two components of oral language is critical. This is the medium through which most teaching and curriculum is conveyed and

discussed (Love & Reilly, 2010). Johnston (2004) reinforces this view by focusing on the educator's role: "Talk is the central tool of trade. With it they (teachers) mediate children's activity and experience, and help them make sense of learning, literacy, life, and themselves" (Johnston, 2004, p. 4).

Hill (2010) supports this emphasis of the importance of oral language by stating it is central to thinking and understanding. She stresses that oral language is a complex system and the role of adults in language learning starts early. Clay (1998) argues that "Children do not learn language by imitation. They learn to talk by talking to people who talk to them, understanding what they are trying to say" (p. 8), this highlights the significant role interactions and the 'knowing other' have in the intention of language learning. Clay (1998) also contends that families may be implicit teachers in the ways they support children's language acquisition.

Language develops through interactions with 'knowing others' which is inherent in Vygotsky's (1978) theory of assisted development (teaching), the idea that learning is a shared process in a social context. A child is capable of far more when assisted by an adult, for example, caregivers or teachers. This process of co-construction allows the child to learn to use the three components of oral language (phonological, semantic and syntactic) as they develop their knowledge and understanding about how oral language works (Ministry of Education NZ, 2009). Vygotsky believed that through language 'knowing others' can use opportunities for intentional instruction in the learner's 'zone of proximal development' to take maximum advantage of an experience, as in a teacher scaffolding student learning. This being what the learner is able to do in conversation with a more 'knowing other' today, they will manage alone using 'internal dialogue' or 'inner speech' tomorrow (Wells, 1986).

The importance of these social interactions, before starting school, has a critical role in early learning language. Bruner, in *Child's Talk* (1983), described the interaction between mother and infant as “engaging” in activities. As the infant attends to the mother’s face, smiles and vocalising, these are all exchanges with meaning. Raban (1999) asserts that at home conversations and experiences tend to involve familiar language and concepts for a child. Conversations usually occur with a familiar audience and involve known patterns of discourse. Raban (1999) adds that conversations in the home are exchanges that tend to be short, have an immediate purpose and a shared experience or assumed knowledge. Home talk tends to be one-to-one exchanges often accompanied by actions. Conversations are therefore contextualised, interactions are in context and in the “here and now” (Raban, 1999, p. 26). Burns, Griffin and Snow (1999) support the view that young children need meaningful and authentic opportunities to talk to develop and become literate. They emphasise that purposeful interactions with a ‘knowing other’ are also the best source of exposure to new vocabulary and ideas for young children. Therefore, learning through ‘hands-on’ opportunities, by problem-solving and interacting with ‘knowing others’ may depend on the materials and experiences available at home.

These intentional oral language interactions with ‘knowing others’ are described by Love and Reilly (2010) as a “double-edged sword” – as it is both the main means by which the curriculum is delivered and also the content of the curriculum. Hill (2006) explains the many changes in oral language for the school context where conversations and interactions tend to be de-contextualised, therefore, involving less familiar language or new vocabulary, a less familiar audience, unfamiliar topics and are mostly teacher led. Many conversations require meaning to be negotiated, to

reach a mutual understanding of the conversation (Ministry of Education NZ, 2009). The teacher resource published by the Ministry of Education NZ (2009) outlines the teacher's role in supporting students who are less proficient in oral language and who face many challenges associated with interactions and conversations in classrooms. Classroom conversations are used to reflect on experiences that can be disconnected in time and space. Students may need to listen for long periods of time, there may be a delayed purpose or conversations may not always result in successful interactions (Hart & Risley, 2003). This complexity of interactions continues throughout schooling as concepts of metaphor, irony and thinking critically demand that students learn the meta-language to be able to talk about language (Ministry of Education NZ, 2009).

2.2.4 Questioning, literacy and learning.

“Literacy learning cannot be isolated from learning language in general, any more than it can be isolated from the social contexts in which literacy is practiced” (Rose, 2011, p. 1). Rose describes extending teacher classroom interactions by asking questions, which he considers an important way of eliciting student responses to build understandings of the student or group. Rose (2011) emphasises the importance of successful interactions by describing how affirmation and success encourages students to participate more and, therefore, leads to more engagement. In contrast, students who respond less successfully to interactions receive less encouragement and learning benefits. Students who engage successfully in classroom interactions are more likely to extend and improve their language and learning capability which aligns with Stanovich (1986) reference to a ‘Matthew Effect’: The educational phenomenon observed when a new reader improves in

skill level because they feel success as they engage in reading which encourages them to be involved in more opportunity to improve.

The literature shows that the use of questioning while sharing and reading storybooks with children also contributes to language learning. Robbin and Ehri (1994) suggest that storybook reading helps teach children meanings of unfamiliar words. Harrison (2004) agrees by explaining that the interactions during storybook reading may have a significant impact on comprehension and understanding. Student initiated talk and active participation, repeated readings, together with questions and answer sessions all contributing to an increase in vocabulary. Gibson and Scharer (2007) highlight the support learners find in reading ‘little books’ to foster independent reading. These early literacy texts designed to engage early readers provide supported opportunities to extend and practice effective reading strategies. These “little books” create more opportunities for successful text reading. Harrison (2004) refers to a number of studies that illustrate the connection between vocabulary and comprehension. This also links to Rose’s (2011) work which discusses comprehension and the satisfaction and feeling of success achieved by the reader gaining meaning from the text thus leading to empowerment and engagement.

Morgan and Saxton (2006) focus attention on the importance of questioning in teaching and learning, stating that teachers cannot “*control* thinking, but their job is to *generate* thinking” (p. 24). They defend questioning as a way to engage, scaffold and extend conversations with students. One way to develop questioning skill and extend interactions is based on the Blank, Rose and Berlin (1978) research. Blank et al. developed four “levels of questioning” to progress students from concrete to abstract levels of thinking. In a recent extension of ‘Blank’s questioning’, Hill (2010) uses

these four levels of questioning to expand children's language based in the explicit use of books, narrative and themed play boxes. Hill found questioning plays an important role in student learning. She describes how adults ('knowing others') assisted children to formulate stories and move from simple to more complex use of language by using ideas from the books or concrete objects from the play boxes. Hill (2010) also indicates that the teacher's role, through modeling, had an impact on the success of the interaction with books and play boxes to extend children's oral language. Furthermore, Love and Reilly (2008) assert that if teachers wait for three to five seconds after asking a student a question this facilitates longer, more complex answers, increased confidence and more questions from students. They suggest that wait time, together with teacher skill in asking questions, develop a 'culture of questioning' and improves the length and quality of interactions.

Teacher skill in asking questions is noted in O'Toole's foreword for Morgan and Saxton (2006), where he emphasises the increased opportunities and expectations for interactions in effective classrooms, suggesting questioning as a way for teachers to maximize the possibilities of dialogue. The teacher's expertise to "ask the right questions: those that generate, sustain, and deepen dialogue;" (p. 7) were as important as teachers developing a class culture of questioning and inquiry.

However, Morgan and Saxton (2006) explain that questions from children change as they move from the home to school. Tizard and Hughes (1984) found that although children asked more than 50 per cent of the questions in their home, they were asking only 5 per cent of the questions in early schooling. Further research, from Morgan and Saxton (2006) shows that even when students were in high school, the students only asked 15 per cent of classroom questions. Hattie (2002) claims that for 80 per

cent of most class time the teacher is talking and the students are listening. Research conducted by Smith, Hardman, Wall and Mroz (2004) notes that most pupil exchanges were short, with answers lasting an average of five seconds, and were limited to three or fewer words for 70 per cent of the time. The challenge is for ‘knowing others’ to develop a shared responsibility and time in classrooms for questioning is needed: together with a safe environment for this ‘culture of questioning’ to be nurtured. “Good questions take time and so do good answers” (Zull, 2002, p. 200).

2.3 Students and Literacy Learning

Students begin their schooling having experienced a range of opportunities and having developed a variety of skills as a result (Gibson & Scharer, 2007; Raban, 2000). This section investigates the effects of these experiences and opportunities and the possible impact on future teaching and learning.

The learner’s environment, whether at home or at school, is another significant factor in learning the rules of the language (Genishi, 1988; Gibson & Scharer, 2007). Clay (1998) extends this idea by highlighting the value of the positive nature of the child’s environment in language learning. She stresses that if children feel valued and safe in their environment and experience success their learning improves. If the ‘knowing other’ uses simple language and is flexible enough to change their language to suit the language of the child, this natural learning situation creates an environment conducive to learning. Children learn to use oral language for communication by interacting with other more skilled language users (Raban, 1999). Parents and caregivers play a vital role in early language development as they talk, respond, expand, and re-model the child’s attempts to communicate, even when the infant still

babbles. Raban's (1999) refers to this as 'contingent responses' and stresses the value of early interactions and language development taking place prior to a child starting school.

Teachers' observations of students' strengths and needs in oral language, and indeed in all learning areas, provide a framework for the teaching that needs to be provided.

Clay's (1979) research points to the need for the teacher to be sensitive to the learner's thinking, therefore, enabling the teacher to draw the child's attention to things overlooked, to new aspects of the task or to other possible interpretations.

Another example which tailored learning experiences to the child is 'SAID' described by Raban (1999), this is based on four steps: being Stimulate (introduce an activity), Articulate (identify the focus of discussion by stating clear goals), Integrate (link new learning to previous knowledge) and Demonstrate (illustrate new knowledge in actions) which together support language learning. This provides an explicit and scaffolded structure to extend interactions with 'knowing others'.

McNaughton (2002), however, cautions that by only focusing on student needs, can impact on a student's learning potential. He suggests this deficit approach leads to the "adoption of an inoculation model", where instruction is expected to guarantee "immunity" to low levels of improvement. He maintains that making sensitive observations and well informed decisions support those at risk students of diverse backgrounds.

Evidence from Hart and Risley's (1995) work indicates that parents (caregivers) exert influence on the nature of their children's language and literacy achievement.

Australian Government Institute of Family Services, Annual Report (2010-2011) states that the home environment may impact on the value placed on literacy. It

affirms the positive impact on language and literacy through an emphasis being placed on achievement, the availability and use of reading materials, reading aloud to children and the quantity and quality of verbal interactions. Family socio-economic background is also documented in AIFS (Aust. Govt., 2010-2011) as having an impact on student learning outcomes. TasCOSS Media Release (November 2009) draws attention to some startling statistics for Tasmanian communities with Braddon and Lyons electorates, both within the DoE's LSNW boundaries, being identified as the two poorest electorates in Australia. Together with data indicating that approximately 50 per cent of adult Tasmanians do not have functional literacy or numeracy skills.

Currently, Tasmanian schools are working directly with parents from low socio-economic (SES) communities in '*Launching into Learning*' or other state parent-child initiatives. Schools encourage caregivers to engage with children in positive interactions to build vocabulary, model conversations and support opportunities to read picture books. The Tasmanian Government commitment to *The Best Start in Life*, reflects the importance of early years of education and state-wide data from *Kids Come First Outcomes Framework* (DHHS, 2009) analyse the 92 performance indicators across 30 outcomes. Selected items relevant to this study, from this DHHS research, are shown in Table 2.1. In the category of optimal language and cognitive development, key factors mention the role of health and development, quality early education and child attendance, family environment, attitudes and enjoyment of school percentages.

Table 2.1: *Items from the ‘Tasmanian Kids Come First Outcomes Framework.’*

| Item description | LGA | North West region | Tasmania | Year |
|--|-------|-------------------|----------|------|
| <i>Item 6.1:</i> Percentage of children meeting literacy, numeracy and cognition markers on the KDC | 81.8% | 78.2% | 77.9% | 2007 |
| <i>Item 6.2a:</i> Percentage of children in Prep achieving expected outcomes in literacy (PIPS) | | | 83.3% | 2007 |
| <i>Item 6.2b:</i> Percentage of children in Prep achieving expected outcomes in numeracy (PIPS) | | | 83.9% | 2007 |
| <i>Item 13.1:</i> Percentage of students continuing in post compulsory education or training (post year 10) | | | 83.8% | 2009 |
| <i>Item 13.2:</i> Estimated completion of equivalent of year 12 | | | 43.7% | 2008 |
| <i>Item 15.1:</i> Percentage of children read to by a family member most days (aged 6 months to 5 years) | | - | 78.9% | 2009 |
| <i>Item 19.2:</i> Percentage of children and young people aged living in low income households | 27.7% | 27.4% | 25.0% | 2006 |
| <i>Item 27.1:</i> Percentage of students in all schools enrolling in Kindergarten from average population of 4-5 year olds | | | 96.5% | 2008 |
| <i>Item 27.4:</i> Percentage of children aged 0-4 who attended pre-school, kinder, or activity groups regularly | | | 67.4% | 2008 |
| <i>Item 29.1:</i> Absence rates for all government schools | | | 8.3% | 2007 |

Note. Selection of items from *Kids Come First*, 2009.

Key: LGA = Local Government Authority

These data provide insight into background information on the children involved in this Tasmanian research and some environmental factors impacting on their early years of schooling. Some localised data exists for comparison to Tasmanian percentages, from the Tasmanian Early Years Foundation (2009). Table 2.1 shows a higher percentage of low income households in the study Local Government Area than in Tasmania. Children read to by a family member (Item 15.1) were similarly researched by Hill and Launder (2009). They found the potential impact of exposure to books read aloud and storytelling: It not only led to increased vocabulary, but also enhanced phonology and syntax.

Snow, Burns and Griffin’s (1998) investigation of the current difficulties in reading raise concern with the rising demands for literacy, not the declining levels of literacy. They point to the circumstances that place groups of young children at risk for

reading difficulties as those children beginning school with less prior knowledge and skill of attending language, or less understanding of the purpose and process of reading and letter knowledge. Snow et al. (1998) identify that children from poorer households, with lower English skills, with language impairments and whose parents had difficulty learning to read were particularly at risk of arriving at school with weaknesses in these areas and hence of falling behind from the outset.

This identified difficulty is supported by the work of Hay and Fielding-Barnsley (2009), where they reported that oral language difficulties affect approximately 20 per cent of students entering school, increasing to 25-30 per cent in low SES communities. In addition, they note that the oral language interactions in low SES communities do not always support or prepare children for instructional demands of the classroom (Hay & Fielding-Barnsley, 2007). Hay and Fielding-Barnsley (2009) maintain that children's oral language competencies were a key factor which impacts on a child's grasp of the concepts of print, expressive vocabulary, sentence and story recall skills, receptive and expressive language, phonological awareness and letter-naming skills. Their research indicates a strong connection between low SES schools and more evidence of language deficits and below benchmark receptive language scores as compared to middle SES and high SES schools. Hay and Fielding-Barnsley (2009) suggest there were no easy solutions, however, some strategies that may assist include thorough teacher understanding of the student's ability, creating "successful initial literacy experiences" linked to later achievement and enhanced oral language development (p. 158). Children's early life experiences and, therefore, opportunities varied immensely as documented in Hart and Risley's research (2003). Table 2.2 links the number of words children were exposed to in their early years of language experience to family socio-economic status.

Table 2.2: Words and communication children received across SES level.

| Children of... | Words of language experience | | | Types of communication | |
|----------------------|------------------------------|--------------|------------|------------------------|-----------------------|
| | (per hour) | (per year) | In 4 years | Affirmative | Discourage - ments |
| Low SES family | 616 | 3.2 million | 13 million | 1 | 2 |
| Working class family | 1,251 | 6.5 million | 26 million | 2 | 1 |
| Professional family | 2,153 | 11.2 million | 45 million | 6 | 1 |

(Hart & Risley, 2003, p. 116)

Hart and Risley's (2003) longitudinal data show skill differences across socio-economic community groups. 'Types of Communication' data (Table 2.2) reinforce the importance of success in adult-child interactions and the heightened impact of the Matthew effect on the children from professional families. Hart and Risley (2003) conclude that "an intervention must address not just a lack of knowledge or skill, but also an entire general approach to (language) experience" (p. 117).

2.4 Teaching Pedagogy and Practice

Links between the *Report of the National Reading Panel* (National Reading Panel, 2000) and National Inquiry into the Teaching of Literacy, *Teaching Reading: Report and Recommendations* (Department of Education, Science and Training, 2005), stress the conviction that effective literacy teaching should be grounded in evidence-based research. Both papers call attention to teacher training, the skill level of teachers and professional learning opportunities as having the potential to show significant impact on student achievement and outcomes. It becomes the teacher's responsibility to engage in ongoing change and development. Snow, Griffin and Burns (2005) discuss the lack of research in this area and recommend that teachers must develop effective ways of teaching, by maintaining a "recurrent cycle of *learning, enactment, assessment, and reflection*" (p. 2).

Keene and Zimmermann (2007) also emphasise the teacher's role in facilitating oral language opportunities as significant. "Oral language development plays a critical role in learning to read and write well" (Keene & Zimmermann, 2007, p. 40).

Johnston (2004) also reiterates that it is the way in which teachers' talk in the classroom that influences student learning and that there is the need to teach children the language of thought. He further indicates that, the quality of the teaching provided is fundamental to student success (Johnston, 2004). Wells (2003) stresses the 'great benefit' to the reader of talking to clarify interpretations, hear and respond to others ideas to develop their own deeper understanding than if they read on their own.

If the teacher's talk is to facilitate student success and improve outcomes, the teacher's roles of observation and assessment of the student as a learner become paramount. In classrooms, teachers are cautioned to consider the purpose of oral language exchanges as they may be misplaced and may limit students' opportunities to use and learn language (Ministry of Education NZ, 2009). Cazden (1988; 2001) discusses how quality interactions and personalised conversations affect what learning occurs. Clay (1999) concurs with Cazden's earlier work and emphasises two ways to improve classroom conversations: Firstly, there is a need for teacher planning for frequent opportunities to engage in focused meaningful interactions. Secondly, there is a need to improve the quality of these interactions by being aware of wait-time, setting up shared tasks in real situations providing extended opportunities to talk and quality interactions in small groups to ask questions and to personalise the student's learning. Therefore, the overall goal is to extend student vocabularies and control of language structures as active participants. The need to prioritise and value extended opportunities to talk in the classroom appears in Cazden

(2001), where she shows how teacher's support of student's conversations enables change in their language.

The Center for the Improvement of Early Reading Achievement's [CIERA] (Hiebert & Pearson, 2000) research best teaching practice and found a combination of school, teacher and home factors impact on student outcomes. The significant teacher factors included: time spent in small group instruction and independent reading, high pupil engagement, and strong home communication. Effective teachers "asked more questions after reading and time, energy and resources were dedicated to reading programs" (Hiebert & Pearson, 2000, p. 139).

There are a number of rules in language, both social and cultural, that need to be learned by children or students to interact with others successfully. The Ministry of Education NZ (2009) publication refers to social language rules as including how to converse and how to negotiate a learning task and that these need to be learned from a 'knowing other', while it explains that cultural rules may also impact on a child's ability to communicate, as gestures and behaviours can be misunderstood. Clay (2000) maintains child's language growth is "entirely dependent on what people say to him" (p. 70). Therefore, supporting children to learn the rules of language comes from the child using language; children make the irregular regular, for example, a child might say 'runded' or 'eated' and 'tooths' or 'mouses'. These errors are rule-governed. It is through children using language that they establish ways to retain the rules for irregular words (Clay, 2004). Clay (2005a) emphasises that the teacher is in a position to scaffold the learning of rules or new tasks, moving from the known to the new. Prior to Clay's work, Wood, Bruner and Ross (1976), had also stress the

importance for student learning to make connections to prior knowledge as the learner moves from what is familiar to new understandings.

The teacher's underlying beliefs about student learning, and literacy learning in particular, is assisted by having high expectations (Harrison, 2004; Timperley & Phillips, 2003). These high expectations were important even before children enter formal schooling. Mills and Clyde (1990), for example, explain the importance of the beliefs held by preschool professionals about how young children learn to read and write. Teacher's assumptions about how children become literate, either limits or expands the opportunities offered for this development (Raban & Ure, 2001). Raban and Ure (2001) raise the concern that preschool teachers are limited in their expectations of young children and their development of literacy, lack awareness of recent research, lack knowledge of concepts and the need for children to learn to think in literate ways. Preschool teachers tend to not see the 'need' to create opportunities for formal situations to promote reading and writing. Raban (2000) highlights the importance of preschool teachers' high expectations in improving student outcomes, regardless of student background, to provide and support opportunities for rich literacy experiences. This notion is revisited and emphasised by Timperley and Phillips (2003) with specific reference to students from "low – income communities". McNaughton (2002) discusses how the teacher's, or in fact the system's, beliefs about teaching and learning influence expectations. If the "ideas of deficiency, deprivation and disadvantage are strong rationales, this may threaten the effectiveness of an instructional programme" (p. 208).

The Ministry of Education NZ (2009) publication emphasises the importance of time on task and differentiating student opportunities and challenges to promote

individualised learning and as a result of more engagement and motivation. To create avid, thoughtful readers, Keene and Zimmermann (2007), suggest providing time to read and time to talk. They refer to these as “critically important in creating effective classrooms” (p. 38).

Student achievement is also influenced by time spent directly engaged in the learning in a classroom, where “good organisation and strong routines for ensuring on-task behaviours maximise engaged learning time” (Fullan, Hill & Crévola, 2006, p. 32). Differentiated classroom instruction and the opportunity for teaching to be focused on the strengths and learning needs of each student, is one of Fullan, Hill and Crévola’s (2006) three core components, namely personalisation. Even when learning is personalised, teachers need to be mindful of the caution that comes from Hiebert and Pearson (2000), who note that labelling students, such as “*at riskness*, can have an effect on progress, by placing them at greater risk, where educators withhold challenging curricula” (p. 137).

Teacher knowledge and ongoing professional development, is discussed by Snow, Griffin and Burns’ (2005). These contribute to improving student outcomes, as teachers learn more and gain more experience they use their knowledge differently and become more reflective. “No matter how expert teachers become, or perhaps precisely because they are experts, they continue to learn new things” (p. 208). Snow et al. (2005) suggest that some knowledge “disappears” or becomes part of the foundational knowledge for later use. This changing perspective of teacher learning and understanding relied on teacher’s being responsive and reflective, acting and re-acting on new learning. Raban and Ure (2001) emphasise the importance of professional development opportunities, for staff to encourage a change in practice,

when working with early learners. While, Fullan et al. (2006) note the importance of ongoing teacher learning. Cohen and Hill's (2001) research reveals that this improvement was small, showing teachers evidenced 10 per cent of learning in practical change. Unfortunately, the research by Borman and associates (2005) also show that professional learning resulted in little change in classroom practice.

The challenge, therefore, remains to provide teachers with learning opportunities to develop teacher understandings towards more effective teaching practice, which in turn may facilitate improved student outcomes. There is also the challenge of ongoing system reflection and use of data to analyse the correlation between student improvement and teacher learning opportunities. The increasing teacher awareness of the importance of classroom interactions will require teachers to include oral language opportunities within their classroom practice that negotiate meaning and extend thinking and talking. This in turn might lead to providing an education in-line with the Melbourne Declaration (MCEETYA, 2008) to 'aspire to improve outcomes for all young Australians' (p. 5) and meet the two main goals of schooling promoting equity and excellence and for all Australian's to become successful learners, confident and creative individuals and active and informed citizens.

2.4.1 Intervention as a teaching approach.

In describing the approaches to literacy success, Fountas and Pinnell (2009) promote rich classroom opportunities and teaching for literacy learning. However, they indicate that children may not fully benefit from classroom instruction if they were confused about aspects of literacy and that early identification and intervention were necessary. Hattie (2009) suggests the need to deliberately reflect on interventions and to learn what makes a difference to student outcomes: The "excellent teacher must be

vigilant to what is working and what is *not* working in the classroom” (Hattie, 2009, p. 24). Therefore, if intervention is seen as an appropriate response to student learning or skill needs the requirement for review and reflection of progress and effectiveness becomes part of the approach.

In Raban’s (2000) early literacy intervention recommendations for later school success, she refers to two major assumptions. Firstly, that preschool children need to access a wide variety of appropriate and culturally inclusive literacy resources and secondly, that adults (knowing others) need to interact with children to model and draw attention to print in daily use, as well as answer children’s questions and discuss texts with them. If ‘knowing others’ are required to model and question appropriately, the support and evaluation of effectiveness should be a part of the intervention.

In small group or one-to-one intervention situations the opportunities for personalised conversations become more possible. Van Dyke (2006) supports the work of Fullan et al. (2006) and presents three general conclusions of how personalisation increases the use of new language by allowing the child to talk more, therefore, assisting language development. When the teacher talks about the child’s experience, it allows the child to direct the conversation. When the teacher agrees with the child’s observation then the child is more inclined to lead the interaction. When the child talk about their interests, the child is more likely to improve and use new language. Van Dyke’s (2006) research also supports teacher use of ‘reformulation’, to summarise or rephrase a child’s meaning, put ‘ideas in a child’s head’, help a child pull together more than one idea or focusing language around one idea. These assist the child to increase the complexity in language structure, therefore, enhancing the student’s language and conversations. Clay (2004) supports a more focused and

flexible approach than outlined by Van Dyke in intervention situations, where more personalised conversations become opportunities to expand and extend the child's language.

Brenchmann-Toussaint's research study (2010) shows that interventions were more effective when daily opportunities were provided to practice skills and imbed these opportunities into school activities rather than as supplementary programs. This aligns with Zull's (2002) work which advocates the importance of connectedness and practicing newly learned skills to strengthen neural networks and pathways.

2.4.2 Using literature in the teaching approach.

Children's picture books have been used in the oral language intervention program in the current study as incentive for levels of 'Blank's questioning' and the group activity sessions. These books were used to expose students to a broader range of vocabulary and expose students, in like-ability groups, to focused interactions. This was done because Hayes and Anderson research (as noted in Hill and Launder, 2010) indicate the numbers of "rare words" used in children's books were 30.9 per thousand words, while in "everyday speech" they recorded 17.3 per thousand words. For that reason, those children who had opportunities to share picture books regularly, prior to their early years of schooling, would have been exposed to and experienced such "rare word" vocabulary and complex book structures to develop their own oral language. Books containing longer or more complex language structures can challenge those children with less book experience or short term memory (Hill & Launder, 2010) and, therefore, could impact on student understanding of the story.

2.4.3 Brain research links to learning.

Brain research (Brenchmann-Tousaint, 2010; Zull, 2002) suggest that working from the simple to complex, known to new, role of passive learner to active learner, allows the brain to expand its ability to handle more variations at faster speeds. This intentional connectedness, together with increased engagement and speed, is a natural learning process and if the learner believes something is important, they will learn (Zull, 2002). Young learners who realise learning matters in their lives and ‘knowing others’ can help develop this connection. Zull (2002) maintains that no outside guidance or force can cause the brain to learn rather the priority in aiding learning is to assist the learner to feel in control and take ownership of their learning.

Hattie’s (2009) summary of meta-analyses ranks constructivist activities highly, indicating that learning occurs when focused and supported by teachers or ‘knowing others’ and resulted from meta-cognitive activities, feedback and problem-solving interactions. Conversation partners jointly construct meaning through their interactions with children (Ministry of Education NZ, 2009). The ‘knowing other’ guides, teaches and creates opportunities for practice and reformulation of oral language. Van Dyke’s (2006) close analysis of conversations shows that discourse behaviours had an impact on the student’s oral language production, including how much was said and how words were used in new ways. Lo Bianco and Freebody (2001) acknowledge the current Western world’s approach to literacy, as part of everyday life and empowerment is to be able to read to a certain level. Literacy is part of all social practices as Anstey and Bull (2004) explain, “literacy is not just a number of discrete skills but is an active, dynamic and interactive practice which can be used to get meaning from, and to build meaning around, the world and the texts encountered in the world” (p. 10).

2.5 Summary

The literature illustrates that educators need a clear understanding of, and indeed belief in, why they engage in particular interactions and learning experiences in their classroom (Anstey & Bull, 2004; Keene & Zimmermann, 2007). Brain research suggests the need for the learner to be actively engaged in learning. Together with requiring a sense of connectedness, ownership and control over learning with successful practice reinforcing and consolidating learning (Zull, 2002). This research, and other meta-analyses, provide educators with a means to make informed decisions and to ensure the effective teaching of literacy challenges each student within their 'Zone of Proximal Development' (Vygotsky, 1978) by orchestrating classroom environments and learning opportunities. The teacher's sensitive observation and assessment of each student enables meaningful connections and interactions to occur (Harrison, 2004), in-line with the range of prior experiences and knowledge individuals bring to their early years' classroom (Ministry of Education NZ, 2009).

Interactions through oral language, involves a two-way process, a dynamic activity, a way of negotiating and re-negotiating meaning (Clay, 1999). Speakers and listeners actively engage in establishing the contexts of conversations, through clarifying and problem-solving. Extended and personalised opportunities for speaking and listening are needed to learn and develop skills. Genishi and Dyson (1984) describe language learning as a social process, where the priority is to understand by making meaning. However, they warn that children who do not experience or engage in interactions in the home, find it harder to participate in such interactions at school as the context changes.

For learning to occur, Donaldson (1978) refers to the “teacher’s art” of making moment-to-moment decisions in their interactions with students. Therefore, teachers require the professional opportunities to develop deeper understanding and strategies to integrate oral language in early years’ classroom. Skill in observation might heighten awareness to assess what support is needed, and how to offer this, to allow success as well as the student retaining control of the task. Skill in utilising the reciprocity of reading and writing might enhance the creation of purposeful interactions with students to develop understanding and opportunities to practice. Skill in questioning might allow for more extended and scaffolded successful interactions with students. Valuing the importance of oral language and having high expectations of all students might allow for gradual skill development. By a ‘knowing other’ releasing responsibility to the student, learning is enhanced through using language (Raban, 1999).

The strong connections between oral language, reading and writing development remind us that when investigating how a child learns language, we must include the partners in communication. These meaningful interactions create the children’s opportunities to talk, and to talk more with ‘knowing others’. Clay (1998) highlights the empowerment that occurs when ‘knowing others’ scaffold children’s interactions during successful opportunities to talk. “Young children learn to do amazing things with oral language: all they need are opportunities to produce language in situations that are meaningful to them, to be understood, to be part of conversations, and to have a model for language to learn from” (p. 87).

Chapter Three

Intervention Program

3.1 Introduction

In this chapter the oral language intervention program (*Ripples*) used in this study is described. The program had been selected by the intervention school, School A in the study, explicitly to develop the oral language of early years' students and so was adopted for this study. The initial investigation of oral language interventions is explained (3.2) and a brief outline of the pilot program, which trialled the main features of the program used in the intervention, is given (3.3). The approaches designed to be used by the intervention schools (3.4) are then discussed (3.5), and finally, the key features of the intervention program are summarised (3.6).

3.2 Background Intervention Investigation

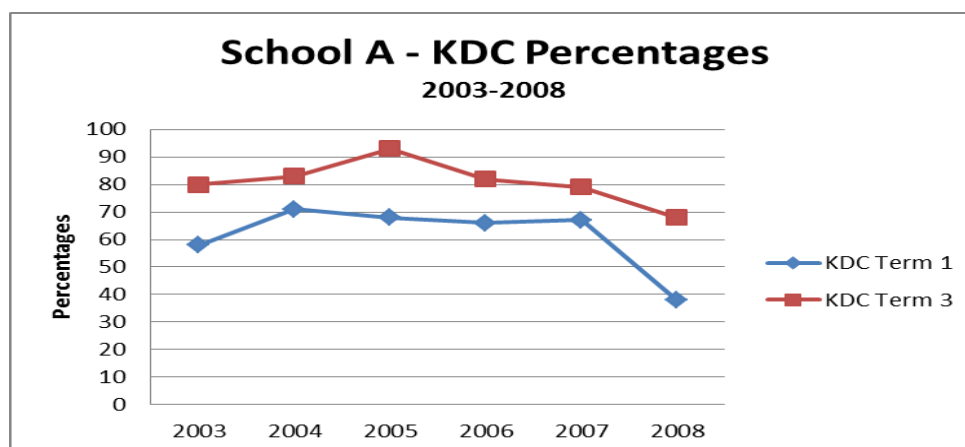
The oral language intervention program which was the foundation of this study was based on two years of oral language intervention that occurred during 2005 and 2006. In July 2007, the principal of a Learning Services North West (LSNW) school, included as the intervention school in this study (School A), was granted funds from the Tasmanian Department of Education (DoE) - LSNW to conduct an action research project. This project was initiated on the basis of the concern that a relatively high number of kindergarten students in School A early in 2007 had been identified as 'at risk' using the Tasmanian DoE, Kindergarten Development Check (KDC) annual assessment (2007). This outcome had raised concern among the school's leadership team and led to a decision to take action.

The KDC is used to assist kindergarten teachers with the early identification of students ‘at risk’ in expected developmental outcomes. These outcomes are assessed using a broad-based readiness assessment on 21 critical core markers, in four learning areas. These areas include 4 Thinking, 5 Literacy, 3 Numeracy, as well as 9 Health and Wellbeing critical markers (Appendix D), therefore, literacy is only one of four aspects assessed. In Tasmanian State schools, the KDC is conducted during Term 1 by kindergarten teachers. Students are defined as ‘at risk’ if any of the 21 critical core markers are not successfully achieved. The minimum KDC expectation is 100%. Students who do not meet any of the critical markers are assessed again in Term 3. It is noteworthy that Tasmania has three school terms.

Benchmark data were available for the four years prior to the intervention program in 2007. Figure 3.1 shows School A’s KDC percentage scores from 2003 to 2008.

There had been a trend during this period of up to 20 per cent of kindergarten students not achieving the desired minimum standard, therefore, were considered not to be fully prepared for their first full year of schooling in preparatory. The 2007 KDC in School A had identified a higher percentage of students ‘at risk’ than expected, 31.7 per cent (20 of 63 students) and this raised leadership concerns.

Figure 3.1: *KDC Benchmark data for School A, 2003-2008.*



Key: KDC Term 1 results assessed early in school year and KDC Term 3 results assessed later in school year.

School A's data showed that, apart from a rise in KDC Term 3 results in 2005, a trend has been apparent with up to 20 per cent of students remaining 'at risk' at the end of their kindergarten year. The speech pathology team at School A had also collected additional data from their kindergarten assessments which raised concerns about the number of low achieving students, which supported the KDC findings. These results had raised the unease of the school's leadership team and been the impetus for 2005 and 2006 staffing changes and these included a specialist oral language teacher in preparatory classes to support an additional focused intervention on oral language for 'at risk' preparatory students. Figure 3.1 also shows the continued decline in KDC Term 1 data of the year beyond 2007, into the year of study focussed on in this thesis (2008).

The preparatory year was identified by School A as the most appropriate year to use an oral language intervention because it is the first year of full time schooling. The five hour school day (25 hours per week) allowed for flexible timetabling of additional programs compared to ten hours per week in kindergarten. A specialist oral language teacher was employed to work with those students identified as 'at risk' using the KDC data from the previous year, speech pathologist data as well as class teacher checklist referrals (Appendix E). An allocated 17½ hours per week (0.5 FTE) was provided to assess and teach flexible student groupings, working closely with the class teachers and speech pathologists. This commitment to oral language enabled detailed data to be collected on all preparatory students identified 'at risk' in literacy.

However, despite this commitment during 2005 and 2006, the data had indicated that the students were not improving in measureable literacy outcomes (that is, reading text levels), even with the intervention provided. This indicated to the leadership

team the need to find a more effective intervention approach, based on researched evidence, which could form the foundation of the school's oral language program.

Due to the school's KDC (Figure 3.1) and 2005/2006 oral language data, School A had identified intervention strategies in oral language for kindergarten and preparatory students but had not detailed any targeted intervention strategy for 2007. At that time, this researcher was a LSNW Literacy Facilitator and had been investigating interstate oral language programs (Victoria) as well as communicating with a Speech and Language Pathologist in Ballarat (Victoria) regarding an oral language program they were implementing, Albany District Oral Language Framework (ADOLF), which originated in Western Australia in 1997. Funding received by School A from LSNW enabled a team of five staff members to travel to Ballarat to work with the senior Speech Pathologist for the Victorian Department of Education in the Ballarat region for four days together with ongoing support.

3.3 Albany District Oral Language Focus (ADOLF)

A key aspect of the preliminary intervention program was that the Albany District Oral Language Focus (ADOLF) program had indicated successful outcomes for students in other Australian states (Davies, 1997; Reynolds, Leitao, Sounness, Durack, & Ebsworthy, 1994). ADOLF was based on the inclusion of oral language-focused activities in daily classroom activities. The program aimed to provide opportunities to record measurable changes in student expressive and receptive language and foundational literacy skills.

An investigation into the history and background of ADOLF (Davies, 1997), indicated that it had been used in the Ballarat (Vic) district from 1995 with regional

speech pathologist data and there was anecdotal evidence of success. During 2007, the underlying pedagogy and levelled 'Blank's questioning' were used in 40 of the 62 schools in the Ballarat region in a variety of approaches. ADOLF was based on an earlier program, the Kwinana Oral Language Programme (Reynolds et al., 1994). This program had been regarded as successful and was further developed and adapted by Western Australian (WA) speech pathologists and teachers for use in schools near Albany (WA) in 1997, using First Steps - Oral Language Developmental Continuum and meeting WA Department of Primary Health objectives (Davies, 1997; Education Department WA, 1997). ADOLF was further developed in WA due to the recognition of a need to provide focused support to early primary aged children with oral language disorders to improve oral language effectiveness. Early intervention was based on the underlying belief that oral language is fundamental, as it underpins all learning and social interactions (Clay, 2004; DEEWR, 2009). As the ability to use oral language effectively enables children to learn, to apply learning and to address the challenges of new skills and information. ADOLF aimed "to prevent and minimise language-based learning difficulties by facilitating the oral language skills necessary for learning, that is: empowering children to learn by helping them develop the skills of talking to learn" (Davies, 1997, p. 9).

ADOLF (Davies, 1997) is an oral language program that was designed specifically to improve the listening, understanding and speaking skills of students in the early years of schooling. It is a whole class program which was planned and developed jointly by WA teachers and speech pathologists. ADOLF comprised oral language and phonological awareness activities that are fun, regular, short and 'hands-on', with additional adults in the classroom to allow more opportunities for modelling, co-

operation and an emphasis on quality. From anecdotal evidence in WA and Victoria, ADOLF was considered to be most successful when aspects of the approach were integrated into the everyday classroom program activities delivered by teachers and teacher assistants and incorporated throughout the whole school day (Davies, 1997).

Furthermore, Marion Blank's Model of Levelled Questioning (Blank, Rose & Berlin, 1978) was integral to the underlying theory and interactions in the ADOLF program.

In the 1970's Marion Blank and a group of psychologists developed 'discourse comprehension' which provided a model of the ways that adults/teachers could interact with students to develop thinking, problem-solving skills, concept development and reasoning. This is now more commonly referred to as 'Blank's questioning' and is a model of language learning that categorises questions based on increasing complexity, that is, four levels of increasing cognitive difficulty and abstraction (Davies, 1997). The change in levels of 'Blank's questioning' from simple to complex, concrete to abstract is described in Table 3.1.

Table 3.1: *Outline of the levels of 'Blank's questioning'.*

| Classification | Level of abstraction | Increasing complexity | Examples of questions |
|--|--|---|--|
| Level I (easiest) (used with 2-3 year olds) | Matching perception | In the 'here and now' 'What' questions and labelling, that is, 'Look at it!' | <i>Find one like this</i> <i>What is that?</i> <i>What did you touch?</i> <i>What things do you see on the table?</i> |
| Level II (used with 3-4 year olds) | Selective analysis of perception | Identifying function, location, categories and differences. that is 'Talk about it!' | <i>What is happening in this picture?</i> <i>Find something that can ...</i> <i>What shape is the bowl?</i> <i>Show me the red, flat one.</i> |
| Level III (used with 4-5 year olds) | Reordering and organising perception | Identifying similarities, sequencing, defining, something that's not or can't 'Think about it!' | <i>Which two are the same?</i> <i>What happened next?</i> <i>How do I make a?</i> <i>Show me the one that cannot roll.</i> |
| Level IV (used with 5 years +) | Reasoning about perception | Being able to reason about the answer. Justifying, explaining, identifying causes, etc. | <i>What made it happen?</i> <i>What could we use to build a new fence?</i> <i>What should happen now?</i> <i>Why will the ice cream melt?</i> |

Adapted from: Blank et al., 1978, p 18; Davies, 1997, pp 55-57; and www.planningforkids.com.

This model provided a structure for adults/teachers to help children/students who struggle with expressive and receptive language to answer questions matching the category with cognitive complexity. LSNW speech pathologists indicated that preparatory students should be able to respond appropriately to Level 4 questions by the end of the preparatory year.

3.3.1 ADOLF application.

The application described in Davies (1997), using ADOLF, required establishing the student's current level of skill in expressive and receptive language. Assessment, using a speech pathologist recommended test, was administered early in the year to establish the student's level of ability to answer levelled 'Blank's questions'.

Students were grouped according to their ability to answer the levelled questions and questions related to picture books and activities during instructional sessions were asked mostly at the children's level. When using 'Blank's questioning', competency must be achieved before progressing to the next levelled group. Adults/teachers mix different levels of questions (for example, a Level 2 ability group are asked 70% level 2 and 30% level 3), to scaffold student learning to move on to the next level. If a student has had difficulty answering a question, the question is simplified by the adult to help the student provide an adequate response. Historically, this form of 'Blank's questioning' has been used by speech pathologists as a diagnostic tool for intervention with students who display expressive and receptive language delays.

3.3.2 ADOLF features.

There are four key features involved in ADOLF (Davies, 1997):

- Increased student-adult interaction due to smaller group size;
- Increased engagement in focused and enjoyable interactions in the classroom;
- ‘Blank’s questioning’ to scaffold students in answering and posing questions of increasing complexity and abstraction; and,
- Building phonological awareness skills.

To improve the effectiveness of ADOLF, Davies (1997) found the program required more adults in the classroom to achieve lower student-to-adult ratios and, therefore, more purposeful, meaningful and supportive interactions. This lower student-to-adult ratio led to increases in student accountability, opportunity for interactions, time on task, engagement, focused learning and targeted feedback (Davies, 1997).

The class teacher worked with the higher achieving students to extend and challenge students in line with their classroom reading and writing program and the specialist oral language teacher or speech pathologist worked with ‘at risk’ students to use specialised skills to scaffold student learning in focused, developmental stages. Additional para-professionals (for example, teacher aides or parent help) in the classroom led the middle groups with the direction and support of the ADOLF professionals.

ADOLF provided a format to introduce ‘Blank’s questioning’ into classroom practice. Under the direction of the Ballarat Speech Pathology team, it was introduced with professional learning for teachers, teacher aides and parents using the regional or school literacy support team. Over time, using popular children’s literature, scripted questions were written by these trained adults for children’s

picture books creating opportunities for adult/student interactions in the classroom (Appendices AA and BB - picture book 'Blank's questioning' scripts). Scripted questions focused on the story to engage and support student comprehension. They were also used to support adults (e.g., teacher aides, parent help) working with students as para-professionals with minimal professional learning and experience in 'Blank's questioning'.

ADOLF included a meta-linguistic component which was designed to develop phonological awareness and the language to talk about language (Davies, 1997). Phonological awareness activities were included to build an awareness of the sounds in words and the ability to directly reflect on language features and provided the language to talk about language. This component provided opportunities for students to use and hear sounds and words in different language structures, while making meaning and thinking critically in a smaller, supportive group led by an adult. This enhanced oral language, as a social activity, encouraged participation while engaging in activities where all students experience, or were scaffolded, to successful outcomes and shared in discoveries about language.

The features of the ADOLF and their respective benefits were identified by classroom teachers and speech pathologists in the Sandhurst District of Ballarat and are summarised in Table 3.2.

Table 3.2: *Beneficial characteristics of ADOLF*

| Albany District Oral Language Focus was designed to..... | Potential benefits |
|---|---|
| ...bring additional adults into classrooms to use questioning and interaction | <ul style="list-style-type: none"> • holistic approach, • decrease group sizes • initiate, scaffold and guide students • increase interactions • students more accountable in group • increase intentional teaching opportunities • increased focused time on task |
| ...identify students 'at risk' in expressive and receptive language development | <ul style="list-style-type: none"> • ability grouping of students to target explicit teaching • scaffold opportunities to extend language development |
| ...gives class teachers access to specialist knowledge and skills of speech pathologists (SP) through professional learning | <ul style="list-style-type: none"> • SP in a consultative role • foster teacher knowledge and understanding of language disorders • develop teacher awareness and skill |
| ...provide intervention within the classroom | <ul style="list-style-type: none"> • students not labelled • flexible groupings • connectedness to classroom activities • students all engaged in similar activities • class teacher can monitor all newly learned skills |
| ...short, intensive, focused sessions | <ul style="list-style-type: none"> • engaged, purposeful learning • students have successful encounters with speaking and listening |
| ...encourage the modelling language by talking about activities | <ul style="list-style-type: none"> • student hear correct language structure and vocabulary • to scaffold and guide students |
| ...allow speech pathologists to be used for student with greater speech issues | <ul style="list-style-type: none"> • specialised expertise used appropriately |

Adapted from Davies, 1997, p. 6.

The implementation of ADOLF in WA and Victoria schools facilitated the opportunities for Speech Pathologists to address the priorities implicit in their role rather than working with children with low home oral language opportunities.

Therefore, Albany District Oral Language Focus was not designed to:

- help children to pronounce sounds correctly, if unclear or immature;
- help children who stutter;
- help children with voice problems;
- help children with a severe language delay; and,
- put extra teaching load onto the already busy class teacher (Davies, 1997).

3.4 Pilot Oral Language Intervention Trial

The pilot intervention trial at School A in 2007 was initiated to assess the effectiveness of ADOLF in the Tasmanian context. The trial program was labelled '*Ripples*' as it did not implement the model exactly as implemented in Ballarat, due to the lack of available staffing resource. The focus of this intervention was to:

- implement program with small groups of identified 'at risk' students;
- decrease the student-to-adult ratio, to groups of 6 to 8 students;
- use and develop teacher/specialist skills in 'Blank's questioning'; and,
- intervene with identified 'at risk' kindergarten and preparatory students.

3.4.1 Pilot intervention trial purposes.

There were a number of additional purposes for the initial pilot trial:

- To assess the applicability of the ADOLF program in a smaller, rural setting in Tasmania, compared to the larger regional context of Ballarat, Victoria (Davies, 1997);
- To measure student outcome change over the 15 week pilot trial;
- To provide staff/parents professional learning to develop understandings and use of speaking and listening strategies to use ADOLF effectively.

3.4.2 Pilot intervention trial program.

Funding was allocated from Tasmanian DoE – LSNW, for a 15 week trial of ADOLF. This enabled the purchase of resource information outlining the program and provided 'Blank's questioning' scripts, assessments and ADOLF implementation guidelines. Two teachers, who had travelled to Ballarat, were employed to implement the pilot trial, assessed and collated data on identified 'at risk'

kindergarten and preparatory students. Kindergarten was not part of the Ballarat implementation but as this had been the impetus of leadership concerns from the KDC, additional data from this grade level were seen to be useful for future intervention consideration. The teachers collected and produced resources for the trial. In this trial there were three groups of four students within kindergarten classrooms and the removal of three groups of five students from each of the three preparatory classes (Appendices F and G).

3.4.3 Pilot intervention trial results.

The effectiveness of the Pilot Intervention Trial at School A was noted using pre- and post-testing of all trial students as having a positive impact on oral language development. Results showed the majority of students increased in scores on the Blank's assessment tool (Appendices F and G). Classroom teachers also reported noticeable improvement in both specific and general aspects of the students' performance, in their ability to pose and answer questions and vocabulary growth related specifically to 'Blank's questioning' and more intentional interactions with adults in expressive and receptive language development and comprehension. While general skills, involving co-operation and sharing, in unsupervised small groups and student-peer conversations and interactions at learning centres, showed the class teachers that there was a transferal of skills beyond the '*Ripples*' context.

The data collected in the 2007 Pilot Trial showed improved results across the trial twelve kindergarten and fifteen preparatory trial students (Appendix Z). However, three kindergarten and seven preparatory students showed a decrease in scores on one or more of the four tests levels between pre-test and post-test. This equated to 13 per cent of tests showing a decrease in scores between pre-test and post-test. These

conflicting data led to questions being raised by School A teaching staff regarding the validity of the assessment tool being used. Ballarat Speech Pathologists had recommended the same pre- and post-test. Oral language teachers at School A did not recognise this as an appropriate measure of student outcome gains. However, as a result of discussions with School A classroom teachers and LSNW speech pathologists and due to the 2007 KDC data, school leadership decided to commit to an oral language intervention initiative over a full school year (2008) using the ADOLF model with some modifications. The Executive Summary Report from this trial is included in Appendix H.

3.5 Oral Language Intervention Program (2008)

As part of School A's 2008 Literacy Plan (Appendix I), the structure and components of the '*Ripples*' oral language intervention program for 2008 was based on the observations and data from the pilot intervention trial of 2007. The key features of ADOLF that were adopted by the Tasmanian intervention school were presented in professional learning sessions to many schools that then became more aware of expressive and receptive language deficits in early years students. This one hour session explained and described the theoretical foundation in 'Blank's questioning', the use of picture books, related activities and phonological awareness as well as the critical application requirements to deliver the desired outcomes for students. The professional learning presented an opportunity for teachers and para-professionals to develop an awareness of children's expressive and receptive language and their role in oral language skill and interactions as well as discuss and question issues specific to each school's context. It also presented the 2007 data and teacher experiences together with student sessions and teacher interview footage. The importance of professional learning was stressed by Allington and Cunningham

(1996) contending that to achieve any effective school-wide literacy program opportunities required the provision of collaborative high-quality instruction to all students and ongoing professional development for teachers.

During 2008, and as a direct result of the oral language professional learning in schools within Learning Services North West (LSNW), several schools began to use the ADOLF approach to early intervention when oral language concerns had been raised by staff leadership. The use of picture books and 'Blank's questioning' in small groups were at the core of the initiatives, with most schools working with 'at risk' students. These schools formed a LSNW action research group to monitor student change while observing and sharing professional skill development.

At School A in 2008, preparatory students were the focus of the oral language intervention program as it was seen as critical to identify concerns and intervene early. School A endeavoured to duplicate the ADOLF model from Ballarat as closely as possible given the localised resources and staffing. Table 3.3 shows that two specially trained staff joined the preparatory classes for half an hour, three days a week with 'Blank's questioning' in relation to books and activities as well as phonological awareness tasks. This allowed for small, focused, like-ability groups to maximise the opportunities for intentional teaching and learning time. As well as the flexibility to move students as skills improved and consolidated. '*Ripples*' in School A as did ADOLF in Ballarat required additional teachers and/or para-professionals to plan and deliver the oral language intervention program. As professionals, teacher awareness of explicit teaching is integral to the effective provision of sessions with students. Therefore, as outlined by Davies (1997), the class teachers worked with the more capable students to make intentional links to classroom extension activities and with the most 'at risk' students to facilitate more

scaffolded and purposeful connections to new learning. While para-professional (for example, teacher aides, class helpers, etc.), with less conceptual understanding of the underlying theory of the intervention program, were engaged in implicit instruction using the supportive scripted 'Blank's questions' and planning instructions.

School B and C early years' staff attended professional learning, as had School A. School B used the '*Ripples*' program and resources with 'at risk' students only. This was due to the school staffing allocation. The same teacher was employed at School A and School B. 'At risk' students were identified as those in danger of literacy failure due to exhibiting low expressive and receptive language skills and slower progress on other class teacher assessed literacy measures. School B's intervention occurred one day a week, with 'at risk' students being withdrawn from the classroom, some times more than once in the day for different components of the intervention.

School C accessed the professional learning session to guide their understanding, development and implementation of an integrated approach for all preparatory students. This approach involved more adults in the classroom, while the class teacher worked with the 'at risk' students. The staff were expected to use 'Blank's questioning' with most texts used in the classroom and phonological awareness activities were a required part of daily teaching and learning experiences.

School D maintained their preparatory program in line with the Tasmanian Curriculum Framework's learning, teaching and assessment principles and Department of Education guidelines of the time. Table 3.3 indicates the level of intervention, staffing and program undertaken by each school involved in this study.

Table 3.3: *Schools, staff and use of oral language intervention*

| | Research schools | Oral Language Intervention | Staffing Resource | Program |
|----------------------|------------------|--|---|--|
| INTERVENTION | School A | Full intervention (All Prep classes received 3 x 30 min. sessions per week) | Professional Learning <ul style="list-style-type: none"> 1 hour initial ADOLF professional learning session for all K-2 staff 2 x 1 hour speech pathologists Blank's questioning session plus access to speech pathologists as consultants Staffing <ul style="list-style-type: none"> 0.6 FTE oral language teacher 0.5 FTE oral language teacher aide Class teacher | <ul style="list-style-type: none"> All Preparatory students assessed by Blank test and streamed, Three small groups (Top, average, at risk) within classroom All Preparatory students participated in <ul style="list-style-type: none"> - two 'Blank's questioning' and - one phonological awareness sessions per week. |
| | | | Professional Learning <ul style="list-style-type: none"> 1 hour initial ADOLF professional learning session for P-2 teachers plus access to speech pathologists as consultants Staffing <ul style="list-style-type: none"> 0.2 FTE oral language teacher (1 day per week) | <ul style="list-style-type: none"> Identified 'at risk' Preparatory students assessed, small 'at risk' groups classroom withdrawal instruction in <ul style="list-style-type: none"> - one 'Blank's questioning' and/or - one phonological awareness session per week (same day) |
| PARTIAL INTERVENTION | School B | Intervention with 'At risk' Preps received 1 or 2 x 30 mins. sessions per week | Professional Learning <ul style="list-style-type: none"> 1 hour initial ADOLF professional learning session for all P-2 staff plus access to speech pathologists as consultants Staffing <ul style="list-style-type: none"> extra teacher, during some of literacy time | <ul style="list-style-type: none"> All Preparatory students participated in – 'Blank's questioning' and phonological awareness integrated into classroom literacy time daily |
| | School C | School led oral language focus | Professional Learning <ul style="list-style-type: none"> 1 hour initial ADOLF professional learning session for all P-2 staff plus access to speech pathologists as consultants Staffing <ul style="list-style-type: none"> extra teacher, during some of literacy time | <ul style="list-style-type: none"> All Preparatory students participated in class literacy time daily |
| NON - INTERVENTION | School D | No intervention | Speech pathologists as consultants and awareness of low oral language cohort Staffing <ul style="list-style-type: none"> extra teacher, during some of literacy time | <ul style="list-style-type: none"> All Preparatory students participated in class literacy time daily |

3.5.1 Intervention program at school A.

In 2008, as a result of the 2007 Oral Language Trial at School A, the school implemented the Oral Language program –‘*Ripples*’ for all preparatory students.

‘*Ripples*’ was based on ADOLF and used its’ key features outlined earlier from the Davies’ (1997) implementation (Table 3.2). Some changes were made by the school leadership team to the intervention, based on the 2007 pilot trial intervention.

Kindergarten students were not involved in 2008, as data and anecdotal evidence indicated that due to the ten hour per week of the Kindergarten program, this part-time school year should remain uninterrupted or unchanged. An alternative assessment tool was sourced during the year through the local LSNW speech pathology team to measure individual student oral language gains. Additional support from the LSNW speech pathology team was utilised for staff professional learning, resources and oral language specialist teacher collaboration. This support was accessed by teachers and para-professionals that required more information or assistance. An oral language teacher aide was employed to lower the adult–student ratio during intervention sessions this was intended to facilitate student engagement, interactions and accountability in the smaller groups. More picture books, Blank’s questioning scripts and phonological awareness resources were bought or developed to expand on those used during the ten week trial to the full year intervention.

The 2008 ‘*Ripples*’ oral language intervention program was offered by an oral language specialist teacher, allocated 0.6 FTE (three full days per week) and an oral language teacher aide (0.4 FTE) along with the teachers of each preparatory class at School A. This allowed for each class to have three ‘knowing others’ in the classroom during this focused oral language time to work with smaller groups. This

enabled all three preparatory classes to have students in three flexible, like-ability groupings (top, average and at risk) based on assessment early in the year.

All preparatory students were individually assessed by the oral language specialist teacher (Photo 3.1), using the ADOLF recommended, Blank assessment tool to allow students to be grouped according to ability.

Photo 3.1: *Teacher administering Blank's Assessment*



Note. Permission was sort and received from teachers and caregivers regarding the use of all photographs included in this thesis.

‘*Ripples*’ was included in the 9.15 to 11am literacy block at School A and integrated into the literacy program of each class. There were three, 30 minute sessions a week, the activities included those outlined by session:

Session 1: A ‘knowing other read and shared a picture book with students using scripted, levelled ‘Blank’s questioning’. Each group was questioned with approximately 70 per cent of questions at the assessed ability level to increase exposure and proficiency at their level, with 30 per cent of questions asked at the

next level, to expose students to the higher level of questioning, interaction and thinking. Levelled 'Blank's questioning' sheets were scripted (Appendices AA and BB) for individual picture books to support class teachers and para-professionals who had less experience in formulating questions 'on the run' using a new picture book each week. Photo 3.2 shows an engaged group of students working with a teacher and big book.

Session 2: Groups were involved in activities associated with the picture book, creating the opportunity to consolidate new vocabulary, story meaning and sequence of events as well as 'knowing other' support in co-operation and sharing of resources, organising and focused conversations. (Appendix AA, BB and CC). Photo 3.3 illustrates engagement in the small group focus allowing for increase interactions with an adult and feedback.

Photo 3.2: *Reading picture book and using levelled 'Blank's questions'*



Photo 3.3: *Activity Session (e.g., cooking or craft) tailored to a picture book to re-use the levelled 'Blank's questions' in interactions*



Session 3: Phonological awareness activities and games, nursery rhymes, ‘news-telling clown’ and other activities involved students in focused opportunities to use, sequence and explore language. These opportunities were used to identify and manipulate sounds in words and were targeted to individual group needs, focusing on listening and engaging activities. Photo 3.4 shows this session as students learn to re-tell stories using the supported structure of the ‘news-telling clown’.

Photo 3.4: *Story re-tell using the ‘News-telling Clown’*



The intervention challenges recorded by class teachers were:

- Timetabling concerns as some allocated intervention times caused disruption within the 9.15-11am literacy block to other classroom literacy activities.
- Some group sizes did not target individual students in greater need of support.
- The variation in group leader skill was evident in student engagement and progress. Para-professionals brought differing oral language understanding

and skill levels to the intervention implementation, which required a rotation of adults around the groups to make access equitable.

- Classroom teachers did not work with every student in their class, and relied on feedback from other adult leaders which was not always forthcoming.
- Lack of opportunity for regular feedback from group leaders to class teachers.
- Some students found thirty minutes a long time to remain focussed.

3.5.2 Partial intervention at school B.

The oral language intervention program at School B was conducted by an oral language specialist teacher with 0.2 FTE time allocation on one day per week, from 2008 – 2010. This was the same teacher staffing School A's *'Ripples'* program. School B's approach was a withdrawal model of intervention, with preparatory students being identified by their classroom teachers and assessed by the oral language specialist teacher using the recommended 'Blank's questioning' assessment tool. Those students identified as 'at risk' received one or two sessions, on the same day, in small, like-ability groups. The groupings were flexible and there was regular monitoring of student progress by the specialist oral language teacher and class teachers against an oral language checklist (Appendix E), to allow different students access to the intervention. Table 3.4 outlines the components and purposes of School B's withdrawal oral language intervention program.

Table 3.4: *School B intervention program outline, 2008.*

| Session | Preparatory Activities | Purpose |
|-------------|---|---|
| 1A | Teacher reading picture book and using of 'Blank's questions' at and just above student level | <ul style="list-style-type: none"> • sharing a story for fun, • discuss picture book meaning, • model reading skills, • clarify book vocabulary, • discuss concepts of print in books, • develop prediction and semantic skills. |
| OR 1B | cooking or craft activities (related to the picture books) and using of 'Blank's questions' at and just above student level | <ul style="list-style-type: none"> • story re-tell, • sequencing story or ordering events, • revisit picture book meaning, • story comprehension, • clarify book vocabulary and develop student vocabulary, • use and develop descriptive language, • activity methods, • group co-operation and sharing skills, • model or focus student attention on correct speech forms in the context of small groups |
| and/or 2 | Phonological awareness session such as using games and activities to emphasise syllabification, rhymes, beginning, medial & end sounds, segmentation & blending, manipulation of sounds, etc. | <ul style="list-style-type: none"> • develop phonological awareness • practise listening skills • create meta-linguistic opportunities (where possible) |

3.5.3 Partial intervention at school C.

As shown in Table 3.3, School C accessed the one hour ADOLF professional learning to raise staff awareness and understanding of oral language. School C literacy leadership team then worked with staff to develop levelled 'Blank's questions' for school big books, picture books and mostly levelled guided reading texts. The school integrated their focus on oral language, questioning and phonological awareness into the daily literacy block, 9am to 11am each day. Students were flexibly grouped within their class according to reading and writing ability for the literacy block rather than using 'Blank's questioning' assessment tools. All kindergarten and preparatory teachers and teacher aides were involved and responsible for the developing of resources and making connections throughout the

school day's teaching and learning opportunities to focused levelled 'Blank's questioning' and explicit teaching of phonological awareness. The classroom teachers worked with those students identified as 'at risk' in the literacy block while the class teacher aide worked on other literacy tasks with the rest of the class. Therefore, providing those students most 'at risk' with the most expert teacher. There were additional 'knowing others' in each classroom, working with students to allow for smaller student group work. LSNW speech pathologists were also used as consultants and engaged in professional learning on levelled 'Blank's questioning' and ongoing professional conversations with teachers during the year, as required.

3.5.4 Non-intervention at school D.

Table 3.3 shows the research 'control' status of School D. The school's literacy leadership team were aware of the low cohort of students in the two 2008 preparatory classes and had support from the local Department of Education LSNW speech pathology team. The preparatory classes were involved in daily literacy lessons consistent with meeting the student outcomes outlined in the Tasmanian Curriculum Framework of the time.

3.6 Summary

The initial pilot intervention trial in 2007 in School A resulted in the school's leadership and staff planning for oral language opportunities for speaking and listening in the classroom. The resulting 2008 to 2011 commitment to the intervention program in School A reinforced the expectation to explicitly teach and question preparatory students to improve vocabulary and comprehension of texts and learning opportunities relating to reading and writing.

The anecdotal evidence from School A's oral language staff in 2005 to 2007, produced data to evaluate the effectiveness and student need for intervention (Appendix H). '*Ripples*', in 2008, created data that encouraged investigation into developing the oral language program further into the preparatory classrooms. All staff within the school's kindergarten to Grade two faculty attended 'Blank's questioning' professional learning and created opportunities to participate in the trial format. Professional learning created an awareness and empathy for those students in classrooms with expressive and receptive language issues. The deepening understandings gained, by the implementation specialist and classroom teachers, had made a personal impact on the explicit nature of teaching and questioning of students. The level of conversation in fortnightly meetings reflected on the trial and then the intervention program, which endeavoured to facilitate collegial understandings and support for developing teacher knowledge.

The ongoing data collection from School A's preparatory to Grade two students continued to build evidence on the effect an oral language focus has on student outcomes and is discussed further in this thesis.

Chapter Four

Methodology

4.1 Introduction

This study investigated the outcomes of an oral language intervention program that aimed to stimulate preparatory students' reading and writing skills. The research was undertaken in the second half the students' first year of full time schooling. This chapter outlines the process used to collect data designed to map student progress and the methodology used in this study. It describes the research approach (4.2), ethics and research approval (4.3), research participants (4.4), research instruments (4.5) and the research procedure and stages of data collection (4.6). The limitations of the study (4.7), together with the reliability and validity of the study (4.8), describe the assessments used. This chapter concludes with an outline of the qualitative data organisation (4.9) and a summary of the research methodology within its context (4.10).

4.2 Research Approach

A multi-method research approach was selected for this study as a range of data was required to answer the research questions (Denscombe, 2007). This multi-method approach allowed for triangulation of the data. Triangulation prevents a researcher from accepting too readily the validity of initial impressions (Burns, 2000). The collection of qualitative data through questionnaires, interviews and observations, as well as quantitative data from student testing, produced the data to be analysed and responses to the research questions. This approach provided the opportunity to evaluate the intervention program from different data sources.

The schools selected and the reading and writing assessment tools employed were chosen with the aim to probe deeply and analyse the process and components of the intervention used. This approach was designed to provide an evaluation of the oral language issue being studied and built towards meaningful links to reading and writing development in the preparatory year. These particular schools were already aware of oral language issues arising for students based on individual school data and Literacy Plans together with Learning Services North West (LSNW) speech pathology reports. The schools were selected because they provided a unique opportunity to study the teacher/adult and students in context. Denscombe described the benefits in “studying things as they naturally occur, without introducing artificial changes or controls” (1998, p. 32).

The evaluated intervention program provided explicit learning opportunities for oral language development in early years’ classrooms (Chapter 3). The opportunity existed where two schools in the research area, had employed a specialist oral language teacher implementing different approaches to oral language that could be compared to two similar primary schools in the area which did not have such a resource. This provided an avenue where the implementation of a school-based intervention could be evaluated as it was being developed and assessed, as well as comparisons made with two similar schools undertaking a standard Early Years’ program. The implementation was conducted over six months (June to December, 2008) with forty eight preparatory school students from four primary schools.

This study evaluated the program approaches used by the schools and conducted assessments of the students’ auditory, reading and writing progress using typical

literacy testing as well as questionnaires and interviews of senior staff, teachers, caregivers and educational specialist as shown in Table 4.1.

Table 4.1: *Research Procedures*

| | Student | Teachers | Principals | Caregivers (Parents/Guardians) | Other |
|----------------------|---|--|--|-----------------------------------|---|
| Quantitative Methods | Student assessment tools (Appendices J, K & L) | | | | |
| Qualitative Methods | | Questionnaire (Appendix U) Observation (Appendix Y) | Semi-structured Interviews (Appendix X) | Questionnaire (Appendix T) | Semi-structured Interviews (Appendices V & W) Observation (Appendix Y) |

A quantitative approach, using standard student assessments, was used to track student outcomes over time and was employed with preparatory students identified as either ‘average’ or ‘at risk’ by the school’s literacy leadership team not using any set criteria. The use of commonly used classroom assessment tools provided data on reading and writing tasks (Appendices J, K & L) that were collected and analysed to explore any relationships in the acquisition of useful strategic activities for reading and writing. These data presented the foundation for comparisons of the impact of the intervention program from assessed student performance.

Qualitative data gained through the interviews of key respondents enabled “in-depth understanding, replete with meaning for the subject, focusing on process rather than outcome, on discovery rather than confirmation” (Burns, 2000, p. 460). This qualitative information was not easily generalised and was relatively open to individual observation and interpretation. The research may reflect a personal focus and emphasis through the types of questions asked and how the findings are

interpreted or analysed. However, through consideration of the issues of bias and selectivity, it was possible to present a fair and accurate account of data collected.

The researcher established clear boundaries (Denscombe, 2007) and examined the oral language intervention program used in the study schools' classrooms and how these might have impacted on student outcomes in reading and writing. There are many factors that might impact on children as they develop in a social learning environment both classroom-based and beyond the school environment; however, this study was focused on opportunities within the school context. This approach was concerned with "investigating phenomena" (Denscombe, 2007, 1998, p. 40), as the research was based in authentic classrooms but focused on investigating the outcomes, perceptions and trends.

4.3 Ethics and Research Approvals

A full Social Science Application was submitted as the study involved work with young students attending Tasmanian Department of Education schools. The study received University of Tasmania, Human Research Ethics Committee Network approval on 19th March 2008 (H9922, Appendix A).

Following the submission in March 2008 of the *Application Form for Permission to Conduct Research in Tasmanian Government Schools* with the researcher's *Good Character Check Application* letter, formal approval was gained from the Tasmanian Department of Education on 18th April 2008 (Appendix B).

4.4 Research Participants

After receiving the approvals, four schools were approached by letter to request their involvement in this study (Appendix M). The research participants included schools, principals and/or senior staff, teachers, oral language specialist students, and caregivers (i.e. parents or guardians). Details of the participants are outlined in the following sections.

4.4.1 Schools.

Schools involved in this study were approached as a consequence of their proximity to School A, their interest, or not, in oral language intervention, similar student populations and the leadership's willingness to be involved in the research. The grouping of intervention and non-intervention schools was based on the use of assessment and tracking of students within the preparatory classes at each school. School A and B were focused on improving student oral language outcomes by introducing new components into literacy experiences through '*Ripples*'. School C and D were using the Tasmanian Curriculum Framework and allocated literacy time to present a balanced literacy program. School C integrated the pedagogy of 'Blank's questioning', interactions and phonological awareness activities across the preparatory literacy program with all staff and all students actively engaged. School D was not aware of ADOLF (Davies, 1997) and did not intervene with 'at risk' oral language students.

The schools were four of nine rural, state government primary schools within 10 kilometres of a rural city in north-west Tasmania. All schools were similar, based on their location, year range, student background and the Index of Community

Socio-Educational Advantage (ICSEA), ranging from 951 to 1023, Table 4.2. The median Australian ICSEA is 1000. These schools were considered to be typical provincial (rural) schools in the North West of Tasmania as the average ICSEA of the four study schools is 981 and the average ICSEA of nine local schools is 980.

Table 4.2: *School Profile information from My School website (ACARA, 2008)*

| | | School Facts 2008 | | | Student Background | | | |
|------------------|----------|-------------------|------------|-------|--------------------|-----------------|-----|-------------|
| | | Location | Year Range | ICSEA | Bottom quarter | Middle quarters | | Top quarter |
| Intervention | School A | Provincial | K-6 | 980 | 30% | 40% | 19% | 11% |
| | School B | Provincial | K-6 | 982 | 32% | 40% | 26% | 2% |
| Non-Intervention | School C | Provincial | K-6 | 1032 | 8% | 25% | 58% | 9% |
| | School D | Provincial | K-6 | 951 | 43% | 45% | 8% | 3% |

Note. The term *provincial* is used by ACARA and is used synonymously with rural.

The two intervention schools (School A and B) were employing a specialist oral language teacher at the time of the research, and School A had received additional funding in response to the previously collected Kindergarten Development Check (KDC) data. These data had initiated additional staffing and materials support through the schools' early literacy program. The two non-intervention schools (School C and D), by comparison, had not placed a similar oral language intervention approach into their schools' early years' literacy program. The preparatory staff and leadership teams at School C and D had collected some data in relation to the KDC but were still investigating possible approaches. All schools used the Tasmania Curriculum Framework as the basis of their daily teaching and learning for preparatory students.

4.4.2 Students.

All students in all study schools participated in each school's literacy program and the study student participants were assessed using standardised tasks to measure data changes over six months of twelve preparatory students from each of the four schools. A total of forty eight preparatory students were tracked over the course of this study.

The preparatory student participants for this study (n=48) were selected using a purposive sampling framework (Burns, 2000). Preparatory students who were deemed to be 'at risk' in literacy and of 'average' literacy ability by their class teachers were eligible for inclusion in the research. Preparatory teachers, from each of the four participating schools, were asked to recommend twelve preparatory students from their school, using no set criteria. To maintain a gender balance wherever possible, each participating school was asked to identify three girls and three boys 'at risk' in literacy as well as three girls and three boys of 'average' literacy ability. Consent was sought from caregivers for their preparatory children to participate in the study. The information letter indicated that confidentiality would be enacted for all participants (Appendices N & Q).

4.4.3 Caregivers.

Information letters and consent forms were sent to all caregivers of preparatory students in the four schools (n=215) outlining the research and asked for permission to participate, and 167 (77.7%) returned a positive response, shown in Table 4.3.

Table 4.3: *Caregiver consent forms returned.*

| | | Letters/consent forms to caregivers | Consent forms returned | Percentage returned |
|------------------|---------------|-------------------------------------|------------------------|---------------------|
| Intervention | School A | 75 | 71 | 94.6% |
| | School B | 55 | 51 | 92.7% |
| Non-Intervention | School C | 45 | 24 | 53.3% |
| | School D | 40 | 21 | 52.5% |
| | TOTALS | 215 | 167 | 77.7% |

Intervention schools returned a higher number of consent forms than the non-intervention schools. The intervention school caregivers may have been more aware of the priority placed on oral language in the schools' literacy program over the previous years, especially the trial program at School A. Due to the range of caregivers in each school population, it was necessary to make caregivers aware of the opportunity to have the letter and/or questionnaire read to any caregivers whose literacy skills required some support. The questionnaire (Appendix T) was designed to gain background information on the preparatory student's family or home influences and experiences with regard to speaking and listening, reading and writing.

4.4.4 Preparatory class teachers.

Teachers of preparatory classes at participating schools were initially provided with an information letter (Appendix O), with consent form (Appendix R) and later, those willing to be involved were presented with a questionnaire (Appendix U), and given the opportunity to be interviewed when targeted students were in their classroom. The return rate of questionnaires is shown in Table 4.4.

Table 4.4: *Teacher questionnaires returned.*

| | | Preparatory classrooms in each school | Questionnaires distributed to teachers | Questionnaires returned | Percentage returned |
|----------------------|--------------|---|--|----------------------------|------------------------|
| Intervention | School A | 3 | 4 | 3 | 75% |
| | School B | 2 | 2 | 1 | 50% |
| Non- Intervention | School C | 2 | 3 | 1 | 33% |
| | School D | 2 | 2 | 1 | 50% |
| | TOTAL | 9 | 11 | 7 | 64% |

Note. Some class teachers shared the same grade group

Given the participant distribution, eleven preparatory class teachers received information and consent forms prior to the study commencement. Table 4.4 shows the small number of preparatory teachers involved in the study. The return of teacher questionnaires was voluntary. Therefore, with three schools only returning one teacher response each, it is difficult for the research to draw noteworthy conclusions.

4.4.5 Other staff participants.

Two specialist staff and four school senior staff members were recruited for the study. The specialist staff were included on the basis of their location in LSNW and background knowledge in the area of speech and language development, as well as their access to, and knowledge of, the study schools and students. The speech pathologist and a specialist oral language teacher received information letters (Appendix P), completed consent forms (Appendix S) and were involved through individual semi-structured interviews (Appendices V, W & X).

The speech pathologist worked in the four schools as part of the role of the speech pathology team in LSNW. This role involved oral language professional learning for school staff as well as individual student and group speaking and listening programs

across numerous schools as well as in a consultative role. Speech Pathologists are experts in stimulating oral language development through the use of levels of ‘Blank’s questioning’. The questions move according to complexity from concrete to abstract (Blank et al., 1978). Speech pathologists have a detailed understanding of the complexity of questioning and how to help in simplifying language or in appropriately challenging language skills. The oral language teacher was involved in the initial investigation of the ADOLF intervention in Ballarat, which was integral to the development and implementation of the ‘*Ripples*’ in two intervention schools (School A and B).

The principals of the four study schools (or their senior staff representative) were interviewed to collect details on school early literacy policy and data. Emphasis was placed on challenges faced in early years’ literacy and resource priorities as well as management integral to school leadership. Interviews conducted are shown in Table 4.5. Senior staff representatives (included Acting Principals, Assistant Principals or Literacy Leader) were selected to provide different perspectives on the school literacy plan, particularly to address the data related to speaking and listening and subsequent reading and writing developments (Appendices M and S).

Table 4.5: *Interviews and structured conversations with senior staff.*

| | | Principal interviewed | Senior staff conversations |
|------------------|--------------|-----------------------|--|
| Intervention | School A | 1 | Assistant Principal Literacy leader |
| | School B | 1(Acting Principal) | Assistant Principal |
| Non-Intervention | School C | 1 | Literacy leader |
| | School D | 1 | Literacy leader |
| | TOTAL | 4 | 5 |

4.5 Research Instruments

Assessment tools widely used in Tasmanian classrooms were applied in the study (Appendices J, K & L). These were selected because they are typically used by Australian preparatory to Grade two teachers as part of their ongoing assessment of early years' student literacy. These assessment tools were administered in a standard way to provide data for each student and allowed for specific analysis of the outcome gains made by students in the development of strategic activity in reading and writing. Clay (2002) described the purpose of these assessment tasks for teachers as:

“The observation tasks in this survey.....are designed to allow children to work with the complexities of written language. They do not measure children's general abilities, and they do not look for the outcomes of a particular programme. They tell teachers something about how the learner searches for information in printed texts and how the learner works with that information” (Clay, 2002, p.13).

The six Clay *Observation Survey* tasks included: Letter identification, Concepts about print, Clay word reading list, Burt word reading list (Gilmore, Croft & Reid, 1981), Writing vocabulary list and Hearing and recording sounds in words task and instructional Running Records (Appendices K and L). Study assessment 1 occurred mid-year (June/July) and Study assessment 2 took place at the end-of-year (November/December), using the same tasks, to track possible changes in student outcomes. Each assessment instrument and its purpose are shown below in Table 4.6.

4.5.1 Standard student assessment tools.

Auditory Processing Assessment (APA) is a measure of a child's ability to hold, sequence and process or understand what they have heard (Appendix J). The supporting assessment guidelines indicated that 77 per cent of children entering preparatory are expected to repeat sentences of eight words in length and 93 per cent of children repeat three digits (Department of Education and Training [DET], 2001). All student participants were assessed individually, in a quiet room, according to the administration guidelines for each assessment.

There were three parts to this assessment:

1. Hearing acuity screen – ie. a copying game: Cover mouth and use normal voice, say colour. Cover mouth, whispering colour to check student hearing.
2. Auditory processing – sentences (16) that is, increasing length sentences from 4 to 12 words of increasing syntactic complexity.
3. Auditory processing – digit sequences (12) that is, 3 sets of digits of 2, 3, 4 and 5 digit. Scoring and interpretation outlined in teacher notes.

The second assessment tool for this study was *An Observation Survey of Early Literacy Achievement* (Clay, 2002). This assessment tool included running records and six observation survey tasks. Running records provided a systematic way of providing evidence of reading behaviour on any continuous text (Clay, 2002).

Running records produced information from a child's errors and self-corrections as evidence of the strategic activity when reading. Clay (2002) described the main purpose of a running record is for the teacher to understand more about how the student is using what they know to get to the meaning of the story by assessing accuracy and analysing the sources of information used.

Observation and recording of other reading behaviours were important, such as pace, phrasing and expression, were also part of this assessment. This *Observation Survey* assessment tool was used in all four study schools as part of typical literacy assessment and each school's Reading Recovery intervention for Grade one 'at risk' students. It was used to find additional information for preparatory to Grade two students of concern. The six other tasks are briefly described in Table 4.6, with supporting detail in Appendices K and L.

All students in the study were assessed by the same person to maintain consistency in administration and analysis of the measures. These student scores were all age-normed using Clay's (2002) stanines to allow data to be comparable over time and in relation to change in the age of students.

Table 4.6: *Outline of Observation Survey tasks (Clay, 2002).*

| Assessment instruments | | Purpose |
|------------------------|--|---|
| READING | Letter Identification | <ul style="list-style-type: none"> • Students give one response of either by alphabet name, sound or word to each upper and lower case letter in the alphabet, including (Roman a and g). • Alphabet card is NOT in alphabetical order. • Prompts may be used if student hesitates (Clay, 2002, p.84) |
| | Concepts about Print (CAP) | <ul style="list-style-type: none"> • Observation record of student knowledge of conventions and concepts in print and what student attends to. • Teacher questions student about the way the book works, while reading specific story booklet to student. • Student does not need to talk about these concepts. • Teacher uses administration guide/script (Clay, 2002, p.42-43) and makes sure the student understands what is being asked. • Use CAP booklet between teacher and child and administer as directed. • Use alternate CAP booklet for retesting. |
| | Clay Word Reading List | <ul style="list-style-type: none"> • Word solving. • Student reads from one of 3 word lists of 15 common high frequency words (see lists Appendix K, p. 185). • Teacher may help student with practice word. • Use alternate list for retesting. |
| | Burt Word Reading Test (Gilmore, Croft & Reid, 1981) | <ul style="list-style-type: none"> • Word attack. • Students to read from Test Card, an increasingly complex list of words, until ten successive words are read incorrectly. • There is no time limit. • Preparatory students are expected to achieve between 10 to 20 words correct. |
| WRITING | Writing Vocabulary | <ul style="list-style-type: none"> • Students write independently, on a blank page, words from their known vocabulary. • The teacher can prompt, in couplets, eg. <i>Do you know how to write 'go' or 'me'?</i> or ask questions, e.g., <i>Can you write any children's names?</i> <i>Can you write things you do?</i> • Scoring according to Clay, 2002, p.105-106. |
| | Hearing and Recording Sounds in Words | <ul style="list-style-type: none"> • Phonemic awareness. • The teacher reads a short story, 1 of 5 examples, to the student then rereads, word by word, as the student records the sounds they hear. eg. <i>I have a big dog at home. Today I am going to take him to school.</i> • Scoring according to Clay, 2002, p.113-115. • Use alternate passage for retesting. |

Adapted from Clay (2002).

4.5.2 Instrument pilot study.

All research instruments (i.e. questionnaires and interview questions) were piloted before distribution to school participants. The purpose of the instrument pilot was to validate each instrument prior to the study. The questionnaires and interviews were trialled with four parents of children in Pre-school to Grade one, two teachers and one senior staff member. All those involved in the instrument pilot were not participating parents, teachers or senior staff in the final study. This instrument pilot established the appropriateness of the questions and highlighted any ambiguities or any need to reword statements or questions to improve clarity of meaning. Some passages in the information letters were changed to provide more detail to caregivers and teachers. The caregiver questionnaire had major rewording because of unnecessary use of educational terminology. Piloting also enabled estimating a more accurate timeframe needed to complete the set questionnaires and extra equipment required to have these available for participants. Establishing an explicit procedure and conducive environment for the interview situation was another consideration.

The considered choice of the non-participants to the pilot trial questionnaires reflected a need to choose individuals who were representative of a cross-section of the target groups. The caregivers group to survey for the study contained a wide range of individuals, from a variety of experiences, education, backgrounds and understandings. Particular care was taken to ensure that the questionnaire was easy to read and understand by a broad section of the school community.

4.5.3 Questionnaires.

The questionnaire method was selected to collect data from as many caregivers and teachers as possible in a shorter period time. Burns' (2000) detailed the advantages of questionnaires, as more time efficient than interviewing large numbers of participants, maintaining confidentiality and, therefore, thought to elicit more truthful responses. It was also cost effective, as it allowed for the completion and collection with minimal interaction with the study schools.

4.5.3.1 Caregiver questionnaire.

The questionnaire for caregivers was used to identify the key aspects and variables involved in preparatory students' background and experiences, which might affect oral language, reading and writing development. The aim was to survey a large number of caregivers to gain a broad range of information which would be amenable to statistical analysis (Burns, 2000).

After the questionnaire pilot study, considerable rewording and formatting changes were undertaken. The resulting survey of caregivers was then deemed appropriate, containing tick boxes and Likert type items. It contained four sections:

- Section A: Background, demographic information (4 questions);
- Section B: Questions specific to the preparatory aged child (12 questions);
- Section C: Statements that related to 'at home' behaviours and duration (6 statements); and
- Section D: An open-ended section allowing for parental insights/reflection on child's progress that might have some bearing on the study (5 statements).

Section B and C, sought information on speaking and listening opportunities in the home, use of electronic entertainment and games, involvement in educational

opportunities prior to school, the caregiver's impression of their child's academic ability, caregiver's experiences of school in relation to speaking and listening, reading and writing (Appendix T). As it was not possible to identify caregivers who had given consent for their child to be involved in the study, all caregivers had the opportunity to complete a questionnaire. Of the 215 questionnaires sent to caregivers at the four schools, approximately 43 per cent were returned for analysis.

Table 4.7: Caregiver questionnaires.

| | | Questionnaires distributed to caregivers | Consenting caregivers | Questionnaires returned | Percentage returned |
|------------------|---------------|--|-----------------------|-------------------------|---------------------|
| Intervention | School A | 75 | 71 | 32 | 45.1% |
| | School B | 55 | 51 | 27 | 52.9% |
| Non-Intervention | School C | 45 | 24 | 19 | 79.2% |
| | School D | 40 | 21 | 14 | 66.7% |
| | TOTALS | 215 | 167 | 92 | 55.1% |

4.5.3.2 Teacher questionnaire.

The teacher questionnaire focused on eliciting experiences from the individual preparatory classrooms. This was designed to evaluate the teaching and learning experiences and opportunities provided by teachers and allowed for some links to be drawn between the intention of the experiences and student progress. This instrument contained items relating to demographics (4 questions), speaking and listening, reading and writing opportunities offered in their classroom program (6 statements), school approach to literacy (2 statements), gender expectations (1 statement), impressions of knowledge, skills and professional learning (3 Likert items), and the availability of resources and equipment (3 Likert items), (Appendix U). Due to the obligation to maintain privacy, it was not possible to track study students-to-teacher relationships.

4.5.4 Semi-structured interviews and ‘conversations’.

Semi-structured interviews were used with two key respondents, a speech pathologist and a specialist oral language teacher. These interviewees were purposefully selected for their additional knowledge and expertise in the area of oral language and literacy acquisition as well as involvement and knowledge of the study schools (Appendices V and W). Four semi-structured conversations also involved principals or senior staff, some questions were specific to the principals from each of the four participating schools due to their experiences and administrative decision making. All respondents were given a copy of the focus questions prior to the interview for personal research or reflection. The interviews all began with common demographic questions and then interactions were led by the interviewee and the principal’s areas of expertise or observation due to their specific perspectives (Appendix X). The advantage of the interview process was to clarify meaning and achieve a common understanding of questions or responses. Probing for more detail was also possible. Semi-structured interviews provided a high degree of flexibility and were appropriate for sensitive data collection (Burns, 2000).

Focus questions for the principals/senior staff were related to an overview of the individual school and Learning Services’ Literacy Action Plan. Interview questions addressed:

- the school’s strengths in the speaking and listening, reading and writing areas, as reflected in their early literacy data (KDC and PIPS);
- the school literacy plan to specify initiatives and programs offered (eg. visiting performance groups, leadership, buddy programs);
- an evaluation of the initiative, ie. the data related to interventions across time;
- the funding allocation to areas of need and staffing;
- the student outcome markers for literacy success (Appendix X).

The two specialist interviews were tailored to the individual's LSNW roles. The speech pathologist's interview questions focused on school and student data, current oral language programs, resourcing, oral language observations and issues (Appendix V). The interview questions for the oral language teacher, employed by the two schools implementing oral language intervention programs, had a broader, cross-campus and across classroom perspective. This allowed for details of program implementation and personal impressions of the student trends, strengths and needs (Appendix W).

These semi-structured interviews were conducted by the researcher to limit potential confounding variables (Burns, 2000). As time was a crucial factor for these school professionals, special attention was given to allocate a time for the interview. Each interview was allocated 30 to 45 minutes and this was adequate for all interviews.

An audio-tape recording was used to improve the accuracy of the data collection and this allowed the interviewer to focus on the questioning rather than the recording of responses. The resulting rich descriptions of the existing situation from the perspectives of the speech pathologist and oral language teacher were more appropriate than relying solely on questionnaires which provided a broad understanding from a wide range of participants (Burns, 2000).

The audio tape recordings were transcribed and transcripts were presented to the interviewees for any amendments. No changes were required from this process.

4.5.5 Observations or classroom shadowing.

Observation was selected to triangulate teachers' responses to the questionnaire and the semi-structured interview. Teachers of each of the nine classrooms containing students involved in the study were approached and three classrooms were observed

to monitor speaking and listening, reading and writing opportunities. The instrument (Appendix Y) contained a table of observable characteristics or activities such as speaking, listening, reading, writing, art, numeracy and play. The time devoted to these activities was recorded. This observation instrument was optional for teachers, however, it provided an added dimension to the data and detailed evidence of classroom practice.

As it was recognised that this instrument had the potential to be very intrusive for the students and classroom teacher, efforts were made to minimise any interference to class instructional time. Observation occurred in classrooms during the allocated literacy time for a period of two hours on one day per class. It was important that observation was discreet, to not interrupt the existing class dynamics, interactions and instruction. This was achieved by not making eye contact or interacting in any way with anyone in the room. Recording of observations was kept to a minimum and more detailed observations were documented outside the classroom.

Burns' (2000) noted that the environment itself presents set expectations, preferences and biases which impact on student engagement, motivation and ability to problem-solve words in reading and writing for themselves. The student interaction with their learning environment, the stimuli and engaging activities available to students provided valuable devices to develop oral language in interactions with peers and teachers. Making note of the display of texts and the availability of writing materials to support student engagement with reading and writing was part of this observation. However, it was possible that the environment itself presented set expectations, preferences and biases which impact on student engagement, motivation and ability to problem-solve words in reading and writing for themselves (Burns, 2000).

4.5.6 Document analysis.

Official documents and reports within schools were another source of information, such as each school's literacy plan and data for early literacy, special initiatives in early learning (birth to four year old programs), and school population/community composition. For this reason, additional information was researched on the role of oral language skills in the development of reading and writing in the form of materials from:

- (i.) the Tasmanian Department of Education policies and data;
- (ii.) the Bureau of Statistics to establish local statistics;
- (iii.) the individual school Literacy Plans.

Background information on the local community exposed other relevant issues to be considered in this research. Local information on socio-economic status, education levels of caregivers, housing and percentage of government support to selected schools was investigated.

4.6 Data Collection Schedule

Data were collected from participants in several stages:

- Stage 1:* June/July 2008 - Study assessment 1 aggregated statistical results from standard assessment of preparatory students,
November/December 2008 – retested and tabulated Study assessment 2 to record student outcome gains.
- Stage 2:* July/August 2008 - questionnaire distribution and collection,
September 2008 - analysis in table form (Excel) helped create descriptive statistics and the identification of common themes and issues in the open-ended sections.

Stage 3: October/November 2008 conducted semi-structured interviews and conversations,

April/May 2009 - transcripts of interviews were analysed by repeated listening and rereading of transcripts to find trends, and analysed using a modified 'grounded theory' approach (Strauss & Corbin, 1998).

The 'grounded theory' approach required the reading (and re-reading) of the textual data (such as the transcripts) and labelling the variables to note any interrelationships.

4.6.1 Stage 1.

The initial stage was to establish the baseline data assessment of the preparatory students (described in 4.5.1). Assessments of students were conducted during the general class activities and the researcher endeavoured to be as interactive and non-threatening as possible with participating preparatory students. The preparatory students were encouraged to feel comfortable during the testing, to allow them to produce their best results. Student assessments occurred in a short period of time in June/July and again in November/December. This allowed consistency in administration and minimised school and classroom interruptions. Each assessment of every research student took approximately 30 minutes. Sometimes assessments required two interactions with a student, this was affected by school timetabling and student willingness or ability to engage with the eight assessment tasks.

4.6.2 Stage 2.

Scheduling questionnaire distribution and collection from each of the four participating schools met with the planned schedule until most caregivers in two schools did not return questionnaires on the dates allocated. Reminder notices in

school newsletters as well as through individual class teacher were forwarded to caregiver, via students. Principal and specialist interview times were allocated and conducted as well as observation sessions scheduled for those teachers willing to participate. The collation of the resulting data were coded and tabulated.

4.6.3 Stage 3.

Documentation of the semi-structured interview recordings was time-consuming and formatting of the transcripts, to capture interactions, was challenging. A number of different formats for recording the interviews were trialled before an appropriate and convenient choice was made. The interactive nature of the interviews required detailed analysis of the recordings to create the transcripts.

4.7 Limitations

This study had a number of limiting factors. The limitations included school selection, school being only a part of the student's lives, the sampling strategy using questionnaires were not returned by all caregivers, the questionnaire and interview designs were based on a hypothesis of the existing situation in schools being investigated. Reflections on the limitations provided insight and possible modifications for future research in this area.

The research endeavoured to identify schools with many similar features, such as location, year range, student background and ICSEA ranging from 951 to 1032. However, with this commonality, the preparatory students from all four study schools were in nine different classrooms. Students, were therefore, exposed to eleven teachers with their different teaching styles, experiences and classroom skills. These children also returned to their individual homes each day, to experience a

diverse range of social environments with family and friends. Similarly, the school principals' philosophy on education and vision for their schools played a part in the delivery of literacy programs, their effectiveness and the amount of financial and professional support available. These all have the potential to impact on the data obtained.

The use of caregiver questionnaires, with a potential 215 caregiver responses, had the capacity to investigate a breadth of data. A proportion of questionnaires that were not returned (approximately 57%) and this narrowed the variety of responses and, therefore, might limit the validity of the study. Likewise, the member of the household who completed the questionnaire may have affected the perspective of the data collected, which may have resulted in a sampling bias. Table 4.8 shows approximately 77 per cent of questionnaires were completed by females.

Respondent opinions may be limited by the instrument design or the analysis of open-ended sections of the survey was more challenging to code and may be limited by the respondents' ability to capture their answers in written form.

Table 4.8: *Caregiver completing questionnaires.*

| | | Questionnaires distributed to caregivers | Questionnaires returned | Male | Female |
|------------------|---------------|--|-------------------------|--------------|--------------|
| Intervention | School A | 75 | 32 | 8 | 24 |
| | School B | 55 | 27 | 7 | 20 |
| Non-Intervention | School C | 45 | 19 | 2 | 17 |
| | School D | 40 | 14 | 4 | 10 |
| | TOTALS | 215 | 92 | 21 | 71 |
| | Percentages | | | 22.8% | 77.2% |

Burns' (2000) clarified the limitations of interviews as an instrument of research and how this instrument can vary depending on the researcher's ability to design and use

the format in a comfortable and supportive manner and the participants' capacity to respond appropriately to questions posed. It was crucial that this research maintained a standard procedure when presenting the interview questions and that body language did not inhibit or affect participants' responses. This procedure also included any emotional influences or time constraints. Research can also lose validity if permission is withheld or withdrawn (Denscombe, 2007). This has the potential to narrow the research base of such a small purposive sample group, as in this study.

As discussed by Denscombe (2007), it was possible that the investigation was affected by the school involved in the research, that is, a heightened awareness of oral language procedures may have had an impact on subsequent teaching practice, as in the Hawthorne effect. The schools' focus on oral language, in the case of intervention schools, may have impacted on leadership, teacher, teacher aide and caregiver's awareness, emphasis and time on oral language tasks.

The opportunity to make generalisations from the data collected must be tentative, as there were numerous instances in this educational arena for influences to vary. The sample groups bring with them variables, from parental education and experiences to family values and priorities, however, some commonalities were assumed while acknowledging the differences. Awareness of the disadvantages discussed by Bassey (1999), Burns (2000) and Denscombe (2007) illustrated the need for cautious use of the findings. As stated by Bassey (1999), there are many variables impacting on students which determine whether learning takes place. He argued that it is the teacher's responsibility to analyse all the influencing facts and use this information to engage with students, reflect on their classroom and be active in sharing outcomes to leadership and peers.

4.8 Reliability and Validity

The research design of pre- and post-testing of the study preparatory students measured a value-added characteristic, which is influenced by the individual's intervening experiences (Burns, 2000), as in the test-retest method of determining reliability. In this study, the time between tests was approximately six months. The assessment tools were *Auditory Processing Assessment* (Appendix J) and Clay's (2002) *Observation Survey* (Appendices K and L). Clay described her tasks as "a systematic observation" with each task having a standard way of administration, allowing for valid comparisons and detailed recording of observations. The tasks in the *Observation Survey* were designed by Clay (2002) to support teacher observation of how children attend in the classroom and have been used in Australian and New Zealand schools since the text was originally published over 40 years ago. The longevity and international use of these tasks support the use of these measures in this study.

The range of qualitative data gathering instruments used in this study provided information into the role of oral language in the development of reading and writing. By using a variety of sources – questionnaires, interviews, research documents and the number of participants responding to the caregivers questionnaire being within the average 10 to 50 per cent return rate, brought dependability, stability, consistency, predictability and accuracy (Burns, 2000) to the findings. One person conducting all data gathering, assisted in ensuring the consistency of the resulting information. It was recognised that this may allow for some bias in interpretation, as each observer makes their own interpretations of data and experiences (Burns, 2000). While this is still open to a subjective interpretation, participants' responses still sat within a consistent framework of data collection.

The use of qualitative and quantitative instruments brought different perspectives to the study and, therefore, aided in strengthening the reliability and validity of the information gathered. Denscombe (2007) asserted that a multi-site, multi-person and multi-method approach provides an increased level of confidence in the data. Burn's (2000) agreed that it approaches the research from varying perspectives and the resulting triangulation as a key factor in which validity can be assessed. Altrichter, Feldman, Posh and Scomekh (2008) affirmed that triangulation "gives a more detailed and balanced picture of the situation" (p. 147).

4.9 Qualitative Data Analysis

The information from the qualitative research methods, the questionnaires and interviews, were collated and organised into the following categories:

4.9.1 Caregiver questionnaire.

1. Student, teacher, school identification code;
2. Book reading opportunities each week;
3. Time student is involved in conversations at home with an adult each day compared with time playing electric or non-electronic games each day;
4. Caregiver's rating of student's literacy ability.

These data were examined to investigate possible links between student performance in reading and writing and environmental and experiential factors:

- a. home environment and the emphasis on developing oral language skills;
- b. attendance at education services;
- c. time engaged in conversational play versus solitary media based entertainment;
- d. caregivers' engagement with books.

The purposive sample of students used (Denscombe, 2007) needed to remain a consideration in the analysis of the data, as it was possible for this to bias the results.

4.9.2 Teacher questionnaire.

1. Teacher, class, school identification code;
2. Literacy program classification/description;
3. Opportunities for conversations, reading and writing in the classroom;
4. Literacy resources availability and professional learning opportunities.

These data were used to analyse the school environments that may impact on student reading and writing development. The small sample (four schools) and the multi-method approach aided the unravelling of some of the complexities of the school situation and the innumerable variety of influences on student learning. As each school has its' own literacy plan, staff visions and emphases developed over time and through consultation and a team approach to professional learning.

4.9.3 Specialist interviews.

The interviews with the LSNW Speech Pathologist and Oral Language teacher at School A and B detailed:

1. Role and students serviced;
2. Availability of resources;
3. Perceived trends in oral language ability in Preparatory students;
4. Perceived reasons for trends in oral language ability in Preparatory students;
5. Programs in place to address trends.

It was appropriate in this multi-method approach to use a holistic approach (Denscombe, 2007) where there had been the opportunity to emphasise the detailed structures of the relationships and social processes, rather than restricting attention to the outcomes from these.

4.10 Summary

Qualitative and quantitative approaches were used to investigate the role of oral language skills in the development of reading and writing in preparatory students in a Tasmanian context. The situation existed in each of the study schools prior to the research study and was not intentionally influenced by the study. Apart from the student assessments, the study was based in a “natural setting where no situation was artificially generated by the researcher” (Denscombe, 1998, p.31). The data gathering instruments included questionnaires, semi-structured interviews, document analysis and observation as well as tracking student gains with standardised classroom assessments. There was an attempt to triangulate these data to prevent the researcher from “accepting too readily the validity of initial impressions” (Burns, 2000, p.419).

The findings from this study could allow for further investigation beneficial to school administrators, classroom teachers and early years’ students in Tasmanian schools. In addition, they may provide insights into practical experiences and activities to be used by teachers in early years’ classrooms to support and encourage speaking and listening, reading and writing.

Chapter Five

Research Findings

5.1 Introduction

The findings from this research will be presented in relation to the two research questions (5.2 and 5.6). These quantitative data measured the change over time on a range of literacy tasks in

- oral language by using the auditory processing assessment;
- reading by using the reading text level and concepts about print task; and,
- writing by using writing vocabulary and hearing and recording sounds in words tasks.

Some outliers were detected in the data when analysing individual student gains in different tasks. These outliers have not been removed from the findings due to the small number of students in each category ('average' or 'at risk') from each school.

While building a story around the research questions, sub-questions (5.3, 5.4 and 5.5) have been addressed to allow for deeper probing of quantitative data using 'average' and 'at risk' student change in outcomes between the two assessment periods noted.

The presentation of qualitative data (5.6) from the caregiver or teacher questionnaires and semi-structured interviews has investigated the second research question to consider the other factors that might impact on student's reading and writing.

Summarising the findings in relation to the two research questions, in 5.7, revealed that non-intervention schools showed greater overall mean gains across more instruments than the mean gains in intervention schools.

5.2 Research Question 1 – What effect can an oral language intervention program have on reading and writing for preparatory students in rural Tasmanian schools?

The oral language intervention program delivered in two of the four study schools showed no significant gains beyond those made by the two non-intervention schools. One of the two intervention schools had been involved in investigating and implementing an oral language intervention program for two years. The two non-intervention schools were aware of oral language as an area of concern for their preparatory students. Reading was assessed by using Running Records and writing was assessed using Writing Vocabulary and Hearing and Recording Sounds in Words tasks from Clay's *Observation Survey* (2002).

Forty eight preparatory students were initially involved, with twenty four students in the intervention schools and twenty four in the non-intervention schools or 'standard' program. Classroom teachers (n=11) nominated study students by using reading text level data and/or educational or social behaviours. This anecdotal evidence was based on classroom behaviours such as student ability to interact with peers or adults, following instructions, engagement and/or motivation.

5.2.1 Reading text level data.

The Reading Text Level (RTL) findings are summarised in Table 5.1. These data showed the change over time made by students, over 6 months, in RTL from each school. It is noteworthy that the four study schools have a minimum expectation for preparatory students to achieve a RTL of 3-5 by the end of this first full year of schooling. This expectation varies from school to school across Tasmania.

Table 5.1: *Summary of mean reading text level gains.*

| INTERVENTION | SUMMARY TABLE | 'Average' Prep students' reading text level | | | | 'At risk' Prep students' reading text level | | | Mean RTL gains for all students |
|--------------|---------------------------|---|-------------|------------|--|---|-------------|------------|---------------------------------|
| | | Mid-year | End of year | Mean gain | | Mid-year | End of year | Mean gain | |
| | School A | 1.7 | 6.0 | 4.3 | | 0 | 1.0 | 1.0 | 2.7 |
| | School B | 1.0 | 9.2 | 8.2 | | 0 | 2.0 | 2.0 | 5.1 |
| | Intervention Schools Mean | 0.6 | 7.6 | 6.3 | | 0 | 1.5 | 1.5 | 3.9 |

| NON-INTERVENTION | School C | 3.8 | 12.2 | 8.4 | | 1.5 | 3.8 | 2.3 | 5.4 |
|------------------|-------------------------------|------------|-------------|------------|--|------------|------------|------------|------------|
| | School D | 2.3 | 12.0 | 9.7 | | 0 | 1.3 | 1.3 | 5.5 |
| | Non-intervention Schools Mean | 3.1 | 12.1 | 8.7 | | 0.8 | 2.6 | 1.6 | 5.5 |

Note. All schools had 6 students selected in each group. School C had 5 students in each group end of year so these students have been removed from the data at both assessment periods.

Table 5.1 shows that the results of intervention students are smaller total mean gains (3.9 RTLs) compared to non-intervention students (5.5 RTLs) in the changes over time. The mean RTL gains were greater for students in non-intervention schools ('average' students 8.7, 'at risk' students 1.6) than mean gains in intervention schools ('average' students 6.3, 'at risk' students 1.5). 'At risk' students from intervention and non-intervention schools showed no substantial difference.

When specifically comparing 'average' and 'at risk' students (Table 5.1), it was noted that 'average' students made greater RTL gains (range of mean gain 4.3 to 9.7) than 'at risk' students (range of mean gain 1.0 to 2.3). The mid-year RTL scores of 'average' students at the non-intervention schools were higher than those of the 'average' students at intervention schools. Ranking mid-year mean RTL scores in decreasing order were School C > School D > School A > School B. While at the end of the year, School A had shown the least mean gains.

Gender differences, across intervention and non-intervention schools, ‘average’ and ‘at risk’ students, showed girls made greater mean gains than boys, except for the ‘at risk’ group in School D.

Individual student data highlighted that four students may be identified as outliers can be referred to in greater detail using Appendix DD. These students were not removed from the data analysis.

5.2.2 Writing data.

Most students, irrespective of school category (intervention and non-intervention), showed evidence of improvement in writing on the two tasks over the assessment period (Table 5.2 and 5.3). The writing performance of all students was assessed using two tasks from Clay’s *Observation Survey* (2002), the Writing Vocabulary (WV) task and the Hearing and Recording Sounds in Words task (HRSW). The WV task developed by Clay, required students to write down as many words as possible in ten minutes (Clay, 2002, p. 102). The HRSW task involved the teacher reading a short story and the student recording the sounds they hear in the words (such as in dictation). There is a maximum score of 37 (more detail Table 4.6). Four ‘average’ students and eight ‘at risk’ students did not show gains in the assessments used.

The writing findings summarised student achievement in terms of the WV and HRSW tasks of students (‘average’ and ‘at risk’) and by school category in Tables 5.2 and 5.3. The percentage gains in each table indicate that category of student and/or schools that made the greatest gains. Individual student data is detailed in Appendix EE.

5.2.2.1 'Average' student results.

'Average' students, at non-intervention schools, showed a mean improvement by writing 13.8 more words in ten minutes (WV), compared to the 'average' students in intervention schools mean gain of 11 words.

Table 5.2: Summary of Writing tasks performance by 'Average' students.

| 'Average' students | | | | | | | | | | | |
|--------------------|-------------------------------|----------|-------------|-------------|--------|-----------|----------|-------------|------------|--------|--|
| INTERVENTION | SUMMARY TABLE | WV Task | | | | HRSW Task | | | | | |
| | | Mid-year | End of year | Gain | % gain | | Mid-year | End of year | Gain | % gain | |
| | School A | 19.3 | 26.5 | 7.2 | 37% | | 28.2 | 32.2 | 4.0 | 14% | |
| | School B | 11.0 | 25.7 | 14.7 | 133% | | 20.6 | 33.2 | 12.6 | 61% | |
| | Intervention Schools Mean | 15.2 | 26.1 | 11.0 | | | 24.4 | 32.7 | 8.3 | | |
| NON-INTERVENTION | School C | 16.3 | 37.4 | 21.1 | 129% | | 26.2 | 33.0 | 6.8 | 26% | |
| | School D | 21.0 | 28.8 | 7.8 | 37% | | 28.3 | 34.2 | 5.9 | 21% | |
| | Non-intervention Schools Mean | 18.7 | 32.7 | 13.8 | | | 27.3 | 33.7 | 6.3 | | |

Greater mean writing gains (8.3) were made in the HRSW task by intervention 'average' students, with School B 'average' students having made the greater improvement (12.6) compared to the other schools, which range between 4.0 and 6.8 sounds in words. School B 'average' students had a lower mean starting scores, therefore, were closing the gap. As this task had a maximum score of 37, the end of year scores are similar.

'Average' students in non-intervention schools wrote more words in ten minutes (WV), School B made the greatest percentage gain (133%) words, with School C making considerable gains. WV mean gains between the four schools were highly variable. When considering starting scores Schools B and C made greater improvement. School B also had the lowest mean scores at initial (mid-year)

assessment in both tasks but made a greater mean gain in HRSW task scores, than other schools.

5.2.2.2 'At risk' student results.

'At risk' student results (Table 5.3) compare intervention to non-intervention school mean gains in WV - 3.7 to 6.4 respectively. HRSW task results again show non-intervention schools making greater mean gains.

Table 5.3: Summary of Writing tasks performance by 'At risk' students.

| 'At risk' students | | | | | | | | | | | |
|--------------------|-------------------------------|----------|-------------|------------|--------|-----------|-------------|------------|--------|--|--|
| INTERVENTION | SUMMARY TABLE | WV Task | | | | HRSW Task | | | | | |
| | | Mid-year | End of year | Gain | % gain | Mid-year | End of year | Gain | % gain | | |
| | School A | 4.7 | 9.0 | 4.3 | 91% | 8.5 | 12.7 | 4.2 | 49% | | |
| | School B | 3.8 | 6.8 | 3.0 | 79% | 6.5 | 12.2 | 5.7 | 88% | | |
| | Intervention Schools Mean | 4.3 | 7.9 | 3.7 | | 7.5 | 12.5 | 5.0 | | | |
| NON-INTERVENTION | School C | 8.3 | 16.8 | 8.5 | 102% | 17.7 | 27.2 | 9.5 | 54% | | |
| | School D | 2.7 | 7.3 | 4.6 | 170% | 5.2 | 12.5 | 7.3 | 140% | | |
| | Non-intervention Schools Mean | 5.5 | 11.6 | 6.4 | | 11.5 | 19.2 | 8.3 | | | |

The 'at risk' students from non-intervention schools made greater mean gains in both writing tasks than those students from intervention schools. Table 5.3 shows the most substantial mean gain by 'at risk' students occurred in non-intervention School C, a greater mean gain of 8.5 words in WV and 9.5 sounds in the HRSW task than the other schools. This is a reflection of the higher starting scores.

The individual student writing outcomes at the two assessment periods and the gains made in each writing tasks are recorded in Appendix EE. These tables show 'average' boys tended to make lower gains than girls in WV task in Schools A, B and C, while boys made higher gains than girls in HRSW across all schools. School C 'at risk' student did have noticeably more words in their written vocabularies and

recorded more sounds in words than students from other schools at initial mid-year assessment.

5.3 Research Question 1a – What impact on reading and writing has the oral language intervention program had on ‘at risk’ preparatory students in rural Tasmanian schools?

The impact of the oral language intervention program showed gains on two assessment tools used as key measures to answer this sub-question. These assessment tools were the *Auditory Processing Assessment* (APA) from the Victorian Royal Children’s Hospital research project (2001) and Clay’s Concepts about Print task (CAP) from the *Observation Survey* (Clay, 2002).

5.3.1 Auditory processing data by ‘at risk’ students.

To investigate the oral language intervention program for ‘at risk’ students, data were collected through the APA which assesses student’s ability to hold, sequence and process or understand what they have heard (Appendix J and 4.5.1). The findings in Table 5.4 show the summary by schools of sentence and digit sequences that ‘at risk’ students could repeat correctly.

Table 5.4: *Summary of Auditory Processing Data by ‘At risk’ students.*

| | ‘At risk’ preparatory students | | | | | | | | | |
|------------------|---------------------------------------|--------------------|-------------|------------|--------|-----------------|-------------|------------|--------|--|
| INTERVENTION | SUMMARY TABLE | Sentence sequences | | | | Digit sequences | | | | |
| | | Mid-year | End of year | Gain | % gain | Mid-year | End of year | Gain | % gain | |
| | School A | 6.8 | 8.5 | 1.7 | 25% | 2.5 | 3.0 | 0.5 | 20% | |
| | School B | 4.7 | 6.8 | 2.1 | 45% | 2.8 | 3.7 | 0.9 | 32% | |
| | Intervention Schools Mean e | 5.8 | 7.7 | 1.9 | | 2.7 | 3.4 | 0.7 | | |
| NON-INTERVENTION | School C | 8.3 | 9.4 | 1.1 | 13% | 2.8 | 4.0 | 1.2 | 43% | |
| | School D | 4.0 | 7.5 | 3.5 | 88% | 2.3 | 2.7 | 0.4 | 17% | |
| | Non-intervention Schools Mean | 6.2 | 8.4 | 2.4 | | 2.6 | 3.3 | 0.8 | | |

Table 5.4 shows that across both tasks, ‘at risk’ students in both non-intervention schools repeated more sequences compared to intervention students. At the initial assessment, non-intervention School C scored considerably higher than the other schools (8.3 sentence sequences), but ultimately made the smallest mean gain of 1.1. School D (non-intervention) which had the lowest initial score (4) made the greatest mean gain in sentence sequences of 3.5.

At the interventions schools, ten of the twelve ‘at risk’ students were able to repeat at least 4 to 12 sentence sequences compared to ten of the twelve students from non-intervention schools repeating 6 to 11 sentence sequences. Girls at both intervention and non-intervention schools made greater gains than boys in the repeating of sentence sequences, refer to Appendix FF.

The schools mean gains in sentence sequences were ranked from highest to lowest;

- School D > School B > School A > School C.

An observation of these data showed that the ability to repeat digit sequences were considerably lower than that of sentences sequence data and the mean gains reflected this trend as well with schools ranked from highest to lowest;

- School C > School B > School A > School D. The digit sequences performance showed no significant difference between the four schools.

5.3.2 Concepts about print data by ‘at risk’ students.

The second measure to investigate this research question was the CAP task in Clay’s *Observations Survey* (2002). This task enabled an examination of what students already knew about continuous print texts, with regard to concepts and what students were attending to in print. There are conventions or rules to follow when readers and

writers work with print; students do not learn these all at the same time, as Clay outlined in the age expectation for items table (Clay, 2002, p. 47). Table 5.5 shows that ‘at risk’ students in intervention and non-intervention schools made a similar mean gain (3.9-4.0 items). However, there were considerable differences in individual student outcomes at School D. Initial assessments showed intervention school students scored lower mean scores (7.6 items) than non-intervention students (8.5 items).

Table 5.5: *Summary of CAP gains by ‘At risk’ students.*

| INTERVENTION | Preparatory Students | ‘At risk’ students CAP Scores | | | |
|--------------|---------------------------|----------------------------------|-------------|------------|--------|
| | | Mid-year | End of year | Mean gain | % gain |
| | School A | 7.5 | 11.2 | 0.6 | 8% |
| | School B | 7.7 | 11.8 | 0.7 | 9% |
| | Intervention Schools Mean | 7.6 | 11.5 | 0.7 | |

| NON-INTERVENTION | School C | 10.0 | 13.0 | 0.6 | 6% |
|------------------|-------------------------------|------|------|------------|-----|
| | School D | 7.0 | 11.8 | 0.8 | 11% |
| | Non-intervention Schools Mean | 8.5 | 12.3 | 0.7 | |

When reviewing individual ‘at risk’ student scores two students made no gains (one student from both School A and D), while one student from School D decreased in score from 10 to 8 in the six months between assessments. All three of these students were girls.

5.4 Research question 1b – What impact on reading and writing has the oral language intervention program had on ‘average’ preparatory students in four rural Tasmanian schools?

The same two assessment tasks, APA and CAP tasks were used to gain information of ‘average’ student gains in oral language over the research period. ‘Average’ students were identified for this study by class teacher selection with no set criteria as described in 4.4.2. All students were assessed by the same person to maintain consistent administration and analysis of tasks.

5.4.1 Auditory processing data by ‘average’ students.

The findings in Table 5.6 show the ‘average’ preparatory students ability to repeat sentence and digit sequences at the two assessments. Table 5.6 displays a similar pattern in ‘average’ students as the ‘at risk’ students in Table 5.4, where non-intervention schools mean scores were higher than intervention schools. However, non-intervention school’s ‘average’ students achieved higher mean gains on both sentence and digit sequences than intervention school students.

Table 5.6: *Summary of Auditory Processing Data by ‘Average’ students.*

| ‘Average’ preparatory students | | | | | | | | | | | |
|---------------------------------------|-------------------------------|---------------------------|-------------|------------|--------|--------------------------|-------------|------------|--------|--|--|
| INTERVENTION | Preparatory Students | Sentence sequences | | | | - Digit sequences | | | | | |
| | | Mid-year | End of year | Gain | % gain | Mid-year | End of year | Gain | % gain | | |
| | School A | 8.8 | 9.8 | 1.0 | 11% | 3.5 | 3.8 | 0.3 | 9% | | |
| | School B | 9.0 | 10.2 | 1.2 | 13% | 3.5 | 3.5 | 0 | 0 | | |
| | Intervention Schools Mean | 8.9 | 10.0 | 1.1 | | 3.5 | 3.7 | 0.2 | | | |
| NON-INTERVENTION | School C | 9.3 | 12.0 | 2.7 | 29% | 3.3 | 4.0 | 0.7 | 21% | | |
| | School D | 10.0 | 10.3 | 0.3 | 3% | 3.5 | 3.8 | 0.3 | 9% | | |
| | Non-intervention Schools Mean | 9.7 | 11.1 | 1.4 | | 3.4 | 3.9 | 0.5 | | | |

As seen in Table 5.6, intervention schools initial and final assessment scores were lower on sentence sequences than non-intervention schools. When examining the school level data in Table 5.6, School C ‘average’ students made greater mean gains in both sentence and digit sequences than other schools.

5.4.2 Concepts about print data of ‘average’ students.

The second measure of the oral language intervention program shown in the findings below are the scores of the CAP task. The ‘average’ student data in Table 5.7 present different trends to those of ‘at risk’ students on the same tasks in Table 5.5.

Table 5.7: *Summary of CAP gains by ‘Average’ students.*

| INTERVENTION | Preparatory Students | ‘Average’ students CAP Scores | | | |
|--------------|---------------------------|----------------------------------|-------------|------------|--------|
| | | Mid-year | End of year | Mean gain | % gain |
| | School A | 13.5 | 16.8 | 0.6 | 4% |
| | School B | 6.0 | 16.2 | 1.7 | 28% |
| | Intervention Schools Mean | 9.8 | 16.5 | 1.1 | |

| NON-INTERVENTION | School C | 14.7 | 17.2 | 0.5 | 3% |
|------------------|-------------------------------|------|------|------------|----|
| | School D | 12.8 | 15.3 | 0.4 | 3% |
| | Non-intervention Schools Mean | 13.8 | 16.2 | 0.5 | |

Table 5.7 shows intervention ‘average’ students were lower in initial mean scores than non-intervention students and higher in final scores. These low initial scores indicated less understanding of concepts in print. The ‘average’ students at intervention school B made substantially greater improvement in CAP items than ‘average’ students at any of the other schools. It should be noted that this school did have the lowest mid-year mean scores, yet only intervened with ‘at risk’ students.

5.5 Comparing Group Findings

The findings compared the oral language intervention program effect as well as student variability. Overall, the three key findings were:

- Non-intervention schools made higher mean gains than intervention schools on most tasks;
- School C student outcomes tended to be higher than other schools; and
- ‘Average’ students from all schools had a tendency to make greater gains than ‘at risk’ students on most tasks.

5.5.1 Intervention versus non-intervention school data.

Reviewing the findings from all quantitative data showed that:

- RTL mean gains for ‘average’ students were greater in non-intervention schools (8.7) than intervention schools (6.3).
- RTL mean gains for ‘at risk’ students were similar ranging from 1.0 to 2.3 text levels. School A showed the least mean gain.
 - Non-intervention schools – ‘average’ students had made approximately 5.4 times the gain of ‘at risk’ students.
 - Intervention schools - ‘average’ students had made approximately 4.2 times the gain of ‘at risk’ students.
- Writing tasks showed varied results, a trend in School A showed least mean gains in tasks and student groups, except School B ‘at risk’ students in WV.
 - WV task findings indicated greater percentage gain by intervention School B, closely followed by School C.
 - HRSW task showed more variance with ‘average’ students in intervention schools, particularly School B, made greater gains than

non-intervention schools. While ‘at risk’ students showed greater percentage gains in non-intervention School D.

- APA, sentences sequences, exhibited slightly greater total mean gains in non-intervention schools (2.4) than intervention schools (1.9). While mean scores showed better gains in non-intervention schools, the individual schools showed great variation. School D’s percentage gains in ‘at risk’ sentence sequencing (88%) was noted.
- CAP tasks indicated intervention ‘average’ students made greater percentage gains, particularly School B (28%) while non-intervention ‘at risk’ students from School D made higher percentage gains, though started at a lower point.

5.5.2 ‘At risk’ versus ‘average’ student data.

Comparing ‘at risk’ and ‘average’ student performance on the

- RTLs highlighted ‘average’ students (7.4) made over 4.8 times the mean gains of the ‘at risk’ students (1.6).
- Writing tasks provided evidence that ‘average’ students showed greater mean gains than ‘at risk’ students (WV 12.3 - 5.0 and HRSW 7.3 - 6.6 respectively).
 - ‘Average’ students (12.3) more than doubled the WV task score of ‘at risk’ students (5.0).
 - HRSW task showed least variance with ‘average’ students mean gains of 7.3 and ‘at risk’ students 6.6.
- APA assessment tools suggested ‘at risk’ students made greater mean gains than ‘average’ students mean gains.
- CAP tasks showed ‘average’ students at intervention schools made a substantial gain of 6.5, while ‘at risk’ students at intervention and non-intervention schools showed no significant difference (3.9 & 4.0

respectively), with ‘average’ students at non-intervention schools making the smallest gain of 2.5.

5.6 Research Question 2 – What other factors might affect reading and writing for preparatory students in rural Tasmanian schools?

The investigation of some of the factors that might have some bearing on the student outcomes come from considering other variables, such as the student’s home experiences, teacher preferences and specialist observations. Questionnaires were used to gather data from caregivers and teachers, as well as interviews of each school’s senior staff representatives, together with a senior speech pathologist working across all study schools and an oral language teacher working at the two intervention schools.

5.6.1 Caregiver questionnaire data.

There was a keen awareness of the priority being given to oral language at the schools where the intervention programs were underway and this was illustrated by the caregivers higher return rate of questionnaires in intervention schools which was over 50 per cent (School A 51% and School B 54%). Burns (2000), in itemising the disadvantages of questionnaires, acknowledged return rate as a key issue. He suggested response rates to mail questionnaires seldom exceed 50 per cent and rate between 15 to 50 per cent are common. The response rate for this study was in the higher end of this range.

Table 5.8 presents the other factors that might have affected oral language, reading and writing outcomes for preparatory students in the study schools. School C (non-

intervention) findings indicated a number of differences in the external or contextual environment of the children.

Table 5.8: *Data sample collated from Caregiver Questionnaires.*

| | Intervention Schools | | | Non-Intervention Schools | | | |
|---|----------------------|-----------|-----------------------|--------------------------|------------|-----------------------|------------|
| ITEMS | School A | | School B | School C | | School D | |
| No. families in Preparatory | 63 | | 50 | 40 | | 35 | |
| Questionnaires returned (%) | 32 (51%) | | 27 (54%) | 19 (48%) | | 14 (40%) | |
| Respondents (Females) (Male) | 24 8 (75%) (25%) | | 20 7 (74%) (26%) | 17 2 (89%) (11%) | | 10 4 (71%) (29%) | |
| Mean caregiver age | 36yo | | 36yo | 41yo | | 38yo | |
| Single carer homes | 1 (3%) | | 7 (26%) | 2 (11%) | | 4 (29%) | |
| Single child homes | 1 (3%) | | 5 (19%) | 6 (32%) | | 4 (29%) | |
| Preparatory child oldest | 11 (34%) | | 11 (41%) | 15 (79%) | | 4 (29%) | |
| Library Use Town/School | 19 30 (59%) (94%) | | 15 27 (56%) (100%) | 7 19 (37%) (100%) | | 10 14 (71%) (100%) | |
| Books read/week (mean) | 6.4 | | 6.5 | 8.4 | | 6 | |
| Read to child | 32 (100%) | | 27 (100%) | 19 (100%) | | 14 (100%) | |
| Attended paid child care, preschool, kinder | 19 59% | 19 59% | 28 88% | 17 63% | 18 67% | 25 93% | 17 89% |
| | | | | 12 63% | 19 100% | 14 100% | 9 64% |
| | | | | | | | 14 100% |
| Family size range | 1-6 chn | | 1-5 chn | 1-3 chn | | 1-6 chn | |

Note. Blue data is the highest score in each category.

The findings in Table 5.8 show that the mean age of those caregivers completing the questionnaires was from a similar age group (36 to 41 years of age). Non-intervention School C had more single child homes (32%) as well as the most instances where the preparatory child was the eldest child in the family (79%). Therefore, some caregivers were experiencing the school system for the first or only time with the child participating in this study.

Across all schools, the majority of respondent caregivers indicated that they viewed their own child's literacy skills as 'above average'. All caregivers read with their

children using mostly school books or town library books (Table 5.8). All study schools indicated a high use of the school library (94 to 100%). The school furthest from the centre of the rural city (School C) indicated reduced use of the town library (37%), ten kilometres away. School C had a higher mean number of books read to their children per day (8.4), therefore, possibly utilising school or home libraries to facilitate this access to books.

The questionnaires where more in-depth responses to paragraph questions were given, were from those schools where caregivers read more books to children at home. Those caregivers that read less to their preparatory children tended to be from larger families and used the town library less. Caregiver responses indicated that they considered that their preparatory child's reading was at a higher level than their writing.

Section C of the caregiver questionnaire focused on the mean amount of time the study preparatory child spent at home engaged in a variety of activities, as recorded in Tables 5.9 and 5.10. Collating these findings from intervention schools (Table 5.9) responses indicated that:

- The times spent in conversations with an adult by preparatory students were between one to three hours per day.
- Time spent by preparatory students playing indoor board or card games rather than electronic games varied widely.
- Most children played outdoors for half to one hour per day.
- Television, videos and DVD watching varied, with most students watching one to two hours per school day.

- Playing on computers or video games tended to be in the lower range of less than one hour although eight students across all schools were spending more than an hour in this activity.
- Outdoor games with mechanical equipment occupied the larger group of children (64 to 84%) in the less than thirty minute time allocation, with two individual children playing for two and more than three hours per day.

Table 5.9: *Summary of Intervention School Caregiver questionnaire data.*

| AT HOME activities and average times | INTERVENTION SCHOOLS | | | | | | | | | |
|--|----------------------|-----------|-------------|-----------|--------------|-----------|--------------|-----------|-------------------|----------|
| Statement (day = average school day) | Less than ½ hour | | ½ to 1 hour | | 1 to 2 hours | | 2 to 3 hours | | More than 3 hours | |
| | School | | School | | School | | School | | School | |
| | A | B | A | B | A | B | A | B | A | B |
| Time child participates in conversations with an adult. | 0 | 0 | 2 14% | 3 11% | 3 21% | 5 19% | 3 21% | 14 52% | 6 43% | 5 19% |
| Time child spends playing indoor games. | 4 29% | 3 11% | 4 29% | 11 41% | 4 29% | 10 37% | 4 29% | 3 11% | 2 14% | 0 |
| Time child spends playing outdoor game equipment | 1 7% | 2 7% | 6 43% | 4 15% | 3 21% | 16 59% | 2 14% | 2 7% | 2 14% | 3 11% |
| Time your child might watches TV/videos/DVDs | 0 | 0 | 5 36% | 8 30% | 7 50% | 15 56% | 2 14% | 0 | 0 | 2 7% |
| Time child plays computer or video games | 5 36% | 20 74% | 6 43% | 2 7% | 2 14% | 2 7% | 0 | 1 4% | 0 | 0 |
| Time outdoor games, involving electronic or mechanical equipment | 9 64% | 19 70% | 3 21% | 1 4% | 2 21% | 3 11% | 0 | 0 | 0 | 1 4% |

Note. Questionnaire data percentages calculated in each question and time fraction per school.

KEY: Blue percentages are the highest percentage for each school on each activity.

Intervention school students followed similar results with regard to:

- Greater time spent in conversations with an adult;
- Below three hours per day spent playing indoor board or card games;
- Below one hour per day playing on computers or video games;
- Less than half an hour per day involved in outdoor games with mechanical equipment.

The majority of children from intervention School B played with outdoor equipment for up to two hours, an hour more than the general trend. More TV/Videos/DVDs were watched by the majority of intervention schools in the one to two hour range.

Non-intervention school responses in Table 5.10 showed some differences, particularly for School C families. Though qualitative data followed similar results with:

- More than three hours spent playing indoor board or card games;
- Less than half an hour per day playing on computers or video games;
- Less than half an hour per day playing outdoors with mechanical equipment.

Table 5.10: *Summary of Non-Intervention School Caregiver questionnaire data.*

| AT HOME activities and average times | NON-INTERVENTION SCHOOLS | | | | | | | | | |
|--|--------------------------|----------|-------------|----------|--------------|----------|--------------|----------|-------------------|----------|
| | Less than ½ hour | | ½ to 1 hour | | 1 to 2 hours | | 2 to 3 hours | | More than 3 hours | |
| | School | | School | | School | | School | | School | |
| | C | D | C | D | C | D | C | D | C | D |
| Time child participates in conversations with an adult. | 0 | 0 | 2 11% | 2 14% | 6 32% | 3 21% | 4 21% | 3 21% | 7 37% | 6 43% |
| Time child spends playing indoor games. | 4 21% | 4 29% | 10 53% | 4 29% | 3 16% | 4 29% | 0 | 4 29% | 2 11% | 2 14% |
| Time child spends playing outdoor games equipment | 2 11% | 1 7% | 8 42% | 6 43% | 8 42% | 3 21% | 0 | 2 14% | 1 5% | 2 14% |
| Time your child might watches TV/videos/DVDs | 0 | 0 | 7 37% | 5 36% | 8 42% | 7 50% | 3 16% | 2 14% | 0 | 0 |
| Time child plays computer or video games | 14 74% | 5 36% | 4 21% | 6 43% | 1 5% | 2 14% | 0 | 0 | 0 | 0 |
| Time outdoor games, involving electronic or mechanical equipment | 16 84% | 9 64% | 1 5% | 3 21% | 1 5% | 2 21% | 1 5% | 0 | 0 | 0 |

Note. Percentages in Questionnaire data calculated across all schools in each question and time fraction.

Key: Blue percentages are the highest percentage for each school on each activity.

In contrast to the general results, non-intervention school children participated in conversations with adults to a higher degree, responses recorded more than three hours per day in conversations. Time spent playing outdoor games was a greater

time period, ranging from a half to two hours, with more children watching TV/videos/DVDs for longer.

5.6.2 Teacher questionnaire data.

Teacher questionnaire responses indicated that they considered speaking and listening, reading and writing resources and professional learning support in their schools as 'average' to 'excellent' (Table 5.11). Of the eleven distributed teacher questionnaires, seven respondents were analysed (refer to 4.4.4, Table 4.4: Teacher Questionnaire and Appendix U). The mean number of years of teaching experience of the seven teachers was 16 years, therefore, a considerable level of experience.

There was a variety of literacy programs in the preparatory classrooms with all teachers indicating that the literacy programs were a balanced approach to whole language and phonemic awareness, within the allocated 2 hour literacy block at each school. Teachers indicated speaking and listening expectations at the beginning of the preparatory year were for students to be able to communicate with the teacher and other students and, to share and to listen. While, by the end of the preparatory year, the expectation was to communicate with confidence and, to ask and answer questions relating to personal news as well as question and interact with confidence. In relation to reading and writing expectations, student awareness of their own and family names as well as understanding that print contains a message was desired at the beginning of the year.

Table 5.11: *Summary of Teacher questionnaire data (n=7).*

| Statement | Poor | Below average | Average | Above average | Excellent |
|--|------|---------------|---------|---------------|-----------|
| 1. How would you rank the speaking & listening resources in your school? | | | 3 | 3 | 1 |
| 2. How would you rank the reading resources in your school? | | | | 3 | 4 |
| 3. How would you rank the writing resources in your school? | | | 5 | 2 | |
| 5. How would you rank your professional knowledge and understanding of speaking and listening? | | | 2 | 4 | 1 |
| 5. How would you rank your professional knowledge and understanding of reading and writing? | | | 1 | 4 | 2 |
| 6. How would you rank the level of professional support in these literacy areas? | | | | 7 | |

The data from teachers were not collated according to intervention or non-intervention schools due to the small number of individuals involved in the sample, to preserve anonymity. Table 5.11 shows a high degree of confidence and understanding in teacher expertise and school support for teacher learning across the four schools involved in the research.

Resources for speaking and listening were recorded as ‘average’ to ‘above average’, reading resourcing was considered ‘above average’ to ‘excellent’ while writing resourcing were ‘average’. Professional knowledge in speaking and listening, reading and writing were mostly recorded as ‘above average’. Three of the seven teachers rated their own knowledge as ‘excellent’. The level of literacy support was ranked by all teachers responding to the questionnaire as ‘above average’.

5.6.3 Specialist interview data.

The findings presented in Table 5.12 highlight the focus of these specialists as being that of ‘intervention’ rather than enriching daily student experiences. The intervention schools and speech pathologists worked from a deficit model where an awareness of low oral language issue were identified and intervention was put in

place to impact of these deficits. Table 5.12 represents information taken from the transcript of the specialist interviews with a Senior Speech Pathologist in LSNW and the specialist oral language teacher employed at the intervention Schools A and B.

Table 5.12: *Summary of Specialist interview data*

| | Senior Speech Pathologist | Oral language teacher |
|---|---|---|
| Staffing allocation | 1.0 FTE (supervises 5.8 FTE staffing) across 12 schools | 0.6 FTE across 2 schools |
| Schools involved with | Across all schools in LSNW (eastern region) | Intervention schools A and B |
| Number of students involved with | 1125 | 95 |
| Ages of students | 4-7yo | 5-6yo (Prep) |
| Classification of students | 'At risk' students | School A – all Preparatory students School B – 'at risk' Prep students only |
| Major issues | Language Articulation Fluency Limited Speech Pathologists (LSNW) | Limited experiences, Lack of understanding of concepts, Lack of book experience & knowledge, Fewer sustained conversations |
| Possible causes for issues | Caregiver awareness, Waiting until child reaches school before seeking help/intervention, Limited interactions with adults | High exposure to TV, Change from home to school language, Low age appropriate vocabulary, Poor language structure |
| Positive changes in recent years | Speech Intensive programs Staff allocated specific roles (LSNW) 'At risk' students tracked until 20yo, Speech teacher aides in schools | Increased teacher awareness, Increased teacher learning opportunities, Focused intervention targets needs, Small groups - all students accountable |
| Other comments | Annual training for Tas Budget for schools was small Variety of approaches used | 'Ripples' intervention increases motivation & engagement of teachers & students Teacher PL has been powerful Access to specialist good |

The speech pathologist had a broader role within LSNW and, therefore, the potential impact on student outcomes across the four study schools. The speech pathologist had the potential to impact on student development over an extended period of time, if issues persisted in speaking and listening.

The oral language teacher's role was targeted at preparatory students at two schools which had identified concerns relating to oral language skills in early years' learners.

School A intervened with all preparatory students with class groups streamed and oral language tasks targeted just above current skill levels. School B intervened with those students who were identified ‘at risk’ in oral language from school assessments, teacher and speech pathologist referrals.

5.7 Summary

The findings in this chapter indicate that the non-intervention schools showed greater mean gains in oral language, reading and writing outcomes than the schools where the oral language intervention programs were in place.

Research question 1 – What effect can an oral language intervention program have on reading and writing for preparatory students in rural Tasmanian schools?

Half of the ‘at risk’ students, from intervention and non-intervention schools, made gains in reading text level (RTL) within a similar range of 1 to 4 text levels. In writing, all but three ‘at risk’ students made gains. Intervention schools made lower mean gains than non-intervention schools.

‘Average’ student RTL gains were noticeably higher in the non-intervention schools compared to intervention schools. In writing, all but two ‘average’ students made gains. However, intervention schools made two thirds of the gains made by non-intervention schools.

Research question 2 – What other factors might affect reading and writing for preparatory students in rural Tasmanian schools?

All specialists and teachers were confident and positive about their approaches to speaking and listening, reading and writing across all schools. The ‘at home’ activity

data indicated some extensive variability in the time children spend talking with adults, playing outdoor/imaginative games as well as the use of multi-media which may have impacted on speaking and listening opportunities. However, these data were too varied to make definite connections to reading and writing outcomes for students.

Chapter Six

Discussion

6.1 Introduction

In this chapter the findings are discussed by using the literature reviewed and each of the research questions in relation to the initial question: *How can oral language impact on literacy acquisition?* Each section will critically examine the research questions on three levels; the findings related to school category (intervention or non-intervention), individual school performance and student related performance ('average' versus 'at risk') (6.2). Discussion of the 'average' and 'at risk' students outcomes relative to research sub-questions focus on the effectiveness of the intervention program and student groupings (6.3). The implications of home influences and family situations (6.4) will be examined in an attempt to find trends or relationships. While other impacting factors, such as caregiver, teacher and specialist staff responses, will be related to the student outcome data. The chapter summary (6.5) proposes the implications of the findings for future literacy programs.

6.2 Research Question 1 – What effect can an oral language intervention program have on reading and writing for preparatory students in rural Tasmanian schools?

The main finding from this study were that all students, from all schools, made gains on one or more of the assessment tools used to measure oral language, reading or writing improvement. This was regardless of whether the school was categorised as being an intervention or non-intervention school.

However, there were four key findings:

1. Students from non-intervention schools made greater mean gains than students from intervention schools;
2. Of the four schools, students from School C (non-intervention) averaged greater gains than other schools;
3. ‘Average’ students tended to make greater mean gains than ‘at risk’ students on most assessment tools, regardless of school; and,
4. All schools utilised and valued more ‘knowing others’ in the classroom during allocated literacy time.

6.2.1 Intervention versus non-intervention schools.

The results indicated that there were no clear gains to student performance that could be attributed to the school being a member of the intervention category. The oral language intervention program produced no substantial gains in either reading or writing for intervention school students compared to non-intervention school students. In fact, students in non-intervention schools made greater mean gains in Reading Text Level (RTL) than those students at intervention schools. Non-intervention School D students made the greatest mean RTL gain across all students. Intervention School A students made the least mean gains.

Intervention schools using '*Ripples*' were focused on questioning to personalise interactions and used 'knowing others' to develop student skills in-line with Raban (2000), Van Dyke (2006), Vygotsky (1978) and Wells' (2009), research to scaffold, reformulate and develop student language. Small groups were used to focus conversations to clarify vocabulary and, therefore, understanding as well as increase student accountability and engagement. 'At risk' students may have been challenged in establishing the meaning of the "rare words" in picture books or in making the connections to follow up activities due to the complexity of vocabulary as discussed by Hill (2010).

School A's lower mean data could have resulted from lack of connectedness as discussed in Zull's (2002) work. It could be noted that student oral language time (School A) involved different adults in their classroom for three 30 minute sessions per week, with tasks that were not always related to the general classroom program for that day or week. School B intervention was on one day per week, which may not have been the most effective model as Rose (2011) emphasised the importance of regular successful interactions as practice. School B's approach may have been too spaced for 'at risk' students, with little opportunity to practice or make connections to their daily classroom activities or at home.

Non-intervention school students made greater mean gains in both writing tasks than students in intervention schools. These schools were also using smaller group work within the Tasmanian Curriculum Framework (TCF) in all preparatory classrooms. These balanced literacy programs included focused literacy time each day, as recommended by the DoE. This raises concern regarding the approach at intervention schools as the CIERA findings by Hiebert and Pearson (2000) together

with McNaughton (2002) warned that labelling students. At School A and B, during oral language intervention, may have placed students at greater risk by limiting the curricula. Students in non-intervention schools may have had more opportunities to work in mixed ability student groups, therefore, creating shared learning situations and exposing students to a wider range of peer ability and interactions as well as ‘knowing others’ in the classroom. This balanced approach to literacy at non-intervention schools also reinforced Clay’s (2000; 2005a) theory of reciprocity. By not restricting the time for focused oral language sessions, as in intervention schools, connections between reading and writing, writing and oral language, oral language and reading could be drawn on and utilized flexibly throughout the preparatory school day.

6.2.2 School performance.

The results indicate that non-intervention ‘average’ students from School D made greater Reading Text Level (RTL) mean gains than ‘average’ students from School C. The ‘average’ students from intervention School B almost doubled the RTL mean gains of ‘average’ students from School A. School C’s ‘at risk’ students made greater mean gains in RTL than all other ‘at risk’ students. School C ‘at risk’ students worked with the class teachers, an experienced professional with the most ‘at risk’ students. These professionals knew more about these students through daily class observation and assessment, and would therefore, have the best circumstances to scaffold learning experiences and connect these to learning opportunities throughout the student’s day. School D ‘average’ students made noteworthy age-appropriate progress using the TCF and focused literacy time each day.

There were a number of whole school methodologies used by the School C's early years' team. They integrated questioning within the literacy block and throughout the whole school day in preparatory classrooms. This school endeavoured to develop a 'classroom culture of questioning and inquiry' as described in Morgan and Saxton (2006). The whole school instructional expectation was for all 'knowing others' to focus on inquiry, which also facilitated staff skill development in this area. Those repeated opportunities to practise, monitor and reflect on practice, therefore, led to skill development as promoted by Snow et al. (2005).

The storybook texts used at School C were class big books, popular picture books as well as levelled guided reading sets, that is, 'short books' at the instructional reading level of the students. These 'short books' were used in small group situations and were chosen to be at the students' instructional reading level, which was within their zone of proximal development. This allowed students to understand more vocabulary and access the text meaning with 'knowing other' support. It appeared that School C extended student knowledge rather than reinforcing the known. This links to Hill and Launder's (2010) reference to the complexity of "rare words" in popular picture books with greater challenge being experienced by students at Schools A and B during questioning in '*Ripples*' book reading and book activity sessions. By using levelled guided reading sets, School C students were also able to read texts independently, frequently and with a sense of personal reading success while this was less likely with the popular picture books only in classrooms during '*Ripples*' sessions at School A and B.

In writing, School C made the greater gains in the Writing Vocabulary (WV) task for 'average' students together with WV and Hearing and Recording Sounds in Words

(HRSW) task for ‘at risk’ students. The strength of School C’s writing program may emphasise particular teacher skill level or again reinforces the use of the class teacher with the lowest performing students in focused literacy time as referred to by Clay (2000; 2001; 2005a). It might suggest that because these students were achieving more successful opportunities to read and comprehend texts the reciprocity of these developing skills and strategic activity supported their writing of known words in WV or connections to hearing and being able to record the sounds in words in HRSW task.

School B ‘average’ students made higher gains in HRSW nearly doubling the next highest school mean of School C then School D followed by School A. School B’s ‘average’ students, who did not access the intervention program made noteworthy gains within the consistent setting of their classroom program.

6.2.3 ‘Average’ versus ‘at risk’ students.

In relation to the reading results the mean RTL gains showed that all ‘average’ students in all study schools improved in reading data (Appendix DD). Ten of the twenty four ‘at risk’ students in this study made no text level gains, four from intervention schools and six from non-intervention schools, six boys and four girls. All these ‘at risk’ students who did not make any gain in RTL were non- readers (RTL = 0) at the beginning of the study. Sixteen of the ‘at risk’ students and two ‘average’ students, across all schools, were considered ‘at risk’ at the end of the study because they did not reach their school’s preparatory benchmark in RTL of Level 3 to Level 5. The labelling of students can impact on their progress as Hiebert and Pearson (2000) cautioned. The lack of ‘at risk’ student gains might have resulted from lower teacher expectations of these student’s ability or limited opportunities for

these students and this might also be reflected in teacher assumptions and beliefs about student learning (Harrison, 2004; Timperley & Phillips, 2003).

In relation to writing tasks, 'at risk' students at School A continued to be in the lowest performing students with School A 'average' students the lowest in the HRSW task. All preparatory students at School A had small group phonological awareness rhymes, games and activities once a week as a part of '*Ripples*'. These activities focused on the auditory processes and were not connected to written activities, even for the higher ability students. The degree of intervention impact for all students at this school may not be reflected in the twelve students in the study group.

'Average' students at all schools, either intervention or non-intervention, made greater gains in reading. This outcome was replicated by 'average' students in writing tasks as well. It can be easier for class teachers to assess and monitor reading text levels using Running Records (Clay, 2002) to record student reading accuracy, however, it may be considered more challenging to accurately gauge student progress in writing. At times the reciprocal value of using reading, and in relation to this oral language research, to support writing development may be undervalued in the early years of schooling.

6.3 Research Question 1a – What impact on reading and writing has the oral language intervention had on ‘at risk’ preparatory students in rural Tasmanian schools?

Research Question 1b – What impact on reading and writing has the oral language intervention had on ‘average’ preparatory students in rural Tasmanian schools?

Those students identified as ‘at risk’ had been of greater concern to the intervention schools’ leadership teams and the original impetus for finding an appropriate oral language intervention program. ‘Impact’ referred to any noticeable change in oral language, reading or writing assessment measures. ‘At risk’ students at School B made greater mean gains in RTL, APA and CAP than those at School A. While ‘at risk’ students at School A made greater mean gains in WV and HRSW tasks than those at School B. ‘At risk’ students at School C made greater mean gains in RTL, WV, HRSW and APA than those at School D. While ‘at risk’ students at School D made greater mean gains in CAP tasks than those at School A.

The only school where ‘average’ students received intervention was School A. There was a trend for all ‘average’ students to make more noticeable gains than ‘at risk’ students. This would indicate that the preparatory year is an important year of schooling for foundational learning and greater measureable gains in student outcomes. This is reflected in the current and ongoing Australian and State Government initiatives to promote engagement by families and connections with education (2.3), together with Australian Curriculum achievement standards. The overall findings varied across tests and categories of students.

6.3.1 Intervention versus non-intervention schools.

Non-intervention schools showed greater variation in mean gains across tasks while intervention schools were closer in range. Non-intervention schools achieved slightly greater gains in *Auditory Processing Assessment* (APA) sentence and digit sequences as well as Concept about Print (CAP) task than intervention schools. RTL mean gains were only slightly higher for ‘at risk’ students in non-intervention schools (2.0 and 1.3) compared to intervention schools (1.0 and 2.0). Writing tasks mean gains were both higher for non-intervention schools than intervention schools. RTL and writing task mean gains were greater in non-intervention schools. The teachers’ identification of ‘average’ students assumes that these students showed anticipated performance and were following an expected trajectory of improvement in their learning. Therefore, these students had the oral language skills, vocabulary and experiences to engage and interact with the ‘knowing others’ and peers in their classroom.

The leadership teams of the intervention School A provided the required staffing allocation to reduce the ‘knowing other’ to student ratios during ‘*Ripples*’ sessions. The reduced group size supported the individualisation of student learning, especially for those students identified as at greater risk of failure. This increased access to ‘hands-on’ learning experiences and additional opportunities to talk was in-line with the research of Burns et al. (1999) and Raban (1999). Anecdotally, intervention teacher interviews noted that all student ability to follow instructions, interactions with peers or adults, and questioning in the broader classroom context, did change during the intervention, however, this was not evident in the reading and writing data collected. Teachers commented in semi-structured interviews that interactions were longer and more complex, using more appropriate vocabulary or labels and the level

of questions asked by students changed from the concrete to more abstract. These criteria may not have been measurable by the assessment tools used in this research.

Hay and Fielding-Barnsley (2009) referred to children's understanding of concepts of print, vocabulary and retelling skills relationship to oral language competencies. The initial KDC data were also an indicator of low scores in critical markers. In probing the individual items of the CAP tasks, some 'at risk' students who initially had not shown age-appropriate book and language concepts made noteworthy improvement. Specifically, improvement occurred with concepts of directionality, punctuation and positional language.

Intervention schools' staff were more aware of the importance of oral language and levelled 'Blank questions' and this may have created opportunities for more explicit classroom teaching of concepts of print. However, though School A 'knowing others' had more opportunities for teaching concepts, 'at risk' students made the least mean gains in CAP task. Possibly the emphasis for staff was so focused on developing personal questioning skills that some aspects of literacy were overlooked. 'Average' students at School A made gains within the mean of all schools.

6.3.2 School performance.

The individual school data indicated that School C students made the greatest mean gains across more tasks while School A recorded the lowest gains across more tasks. School D showed the highest gains in *Auditory Processing Assessment* (APA) sentence sequences and CAP tasks while School C showed the highest gains in APA digit sequences. Schools A, B and C were all within 0.08 range of gain shown in CAP tasks average scores. In RTL, School B and C showed the highest mean gains followed by School D and then School A (lowest). Schools C and D showed higher

gains in writing tasks for ‘at risk’ students and Schools A and B, third and fourth depending on the task.

The RTL gains of Schools B and C are critical in the light of the purpose of this study. School C, which had developed its own staff awareness of questioning were using guided reading texts, which the students were able to read independently after some ‘teacher’ supported guided reading sessions. By the nature of guided reading, students would have had more opportunities to read books independently and successfully followed by engaging in activities with the same texts after the initial ‘teacher’ book introduction and reading. This may align with Hill and Launder’s (2009) research into the complexity of picture book text and the use of ‘rare words’ as well as Hay and Fielding-Barnsley’s (2007; 2009) studies into the impact of low oral language opportunities in low SES communities. The study schools were in an area where some low SES data were available (Tasmanian *Kids come First*, 2009) although there was no clear way of connecting individual study students and their SES status.

School C had the majority (67 %) of students above 50 per cent on the student background table 4.2. The students involved in the study from this school, (Table 5.9), also indicated small family size, older age of caregivers, more single parent families, more preparatory students were the oldest in the family and all attended kindergarten (Table 5.8).

School B’s mean gain was three times that of the next highest School A in CAP task. School B students initial assessment scores were noticeably lower than the other ‘average’ students as well as lower than ‘at risk’ school groups (Table 5.6 & 5.8). This may have been noted by the teachers as an area of considerable weakness and,

therefore, an additional effort made to build these skills as the group worked more with guided reading texts in the second half of the year.

School C use a more holistic approach to oral language, reading and writing and this tended to result in the greater gains across more tasks for most students. Therefore, the connectedness of this approach to the whole curriculum, the class teacher's leading role in instruction together with the use of 'little books' for ongoing student purposeful practice are key features of this schools pedagogy.

6.3.3 'Average' versus 'at risk' students.

Comparing the outcomes of those identified as 'average' or 'at risk' students, across all assessments, 'average' students achieved the higher mean gains. 'Average' students at non-intervention schools made greater mean RTL gains than 'average' students at intervention schools and all 'at risk' students. All 'average' students made RTL gains while ten individual 'at risk' students made no text level gains. 'At risk' students at intervention School A made the least mean RTL gain.

'At risk' students, on the two main assessment tools, from School A and B were ranked second and third in mean gains. In 2008, Schools A and B had 30 per cent and 32 per cent of the school's student backgrounds in the bottom quarter of this category. This may draw connections to SES, however, this was not investigated thoroughly to draw any conclusions (Table 4.2).

The question of implementation and impact of professional learning on student outcomes in the literature (Snow et al., 2005) was evident by noting that the class teachers and teacher aides involved in the interventions program were new to this approach of sharing picture books and using levelled 'Blank questions'. The

‘knowing others’ ability to interact successfully and purposefully with students using the scripted ‘Blank’s questions’ during ‘*Ripples*’ sessions may have required a longer time than the study period to develop expertise. While the ‘knowing others’ working with students at non-intervention schools were experienced teachers and would have utilised TCF knowledge and literacy background to guide their teaching.

Hattie (2009) and Johnston (2004) examined the quality of teaching, teacher language and explicit teaching. As the intervention schools’ staff, together with School C staff, were developing expertise in oral language, there may have been a lag in impact on student outcomes. The rate at which individual teachers became more observant of student oral language ability and became comfortable engaging in an integrated approach by asking more targeted questions varied considerably from interview and classroom observation data. ‘Knowing others’ at School C were endeavouring to integrate oral language and questioning into the whole day, therefore, allowing more opportunities to practice and connect questioning to all activities as well as developing a thorough awareness and assessment of individual student’s ability to answer questions targeted at the different levels of ‘Blanks questioning’.

In the writing tasks, non-intervention School C made the greatest mean gains in ‘average’ and ‘at risk’ WV task and ‘at risk’ HRSW task. Again, intervention School A students made the least mean gains in ‘average’ students WV and HRSW task as well as ‘at risk’ student HRSW. The difference in mean assessment scores between ‘average’ and ‘at risk’ students from the same schools shows greatest variance at School D, where ‘at risk’ students were considerably less able than ‘average’ students at mid-year assessments. This difference between ability groups

at School D decreases over study period. School C showed the least variance between student groups at both assessments which may emphasise the impact of the whole school approach and flexible groupings used rather the intervention approach and possible restriction of accesses for those deemed 'at risk'. The consistent and integrated approach at School C would support the strong result together with the increased opportunities to use the reciprocal nature of reading and writing tasks in the classroom. The 'at risk' students would have received more continuous support, as the class teacher was the consistent 'knowing other' in the student's learning. At School C, additional 'knowing others' worked with higher ability groupings.

In every classroom teachers are endeavouring to differentiate the curriculum to facilitate the improvement in all students' outcomes. Therefore, the question arises; Can explanations be drawn from Hiebert and Pearson's (2000) work involving labelling students? This study asked teachers to identify students as 'average' or 'at risk' and from the data collected there appear to be only three or four students whose results may be considered outliers. Perhaps this labelling of students introduced or strengthened a 'deficit model' in some classrooms which unfairly impacted on these students' teaching or learning opportunities. Do teachers talk more to 'at risk' students because they see they need more support? Do teachers limit opportunities and experiences working from a deficit model? Do 'at risk' students have more behavioural and attendance issues impacting on outcomes? Do teachers group 'at risk' student together and, therefore, not expose them to conversations, interactions and experiences to further develop their capabilities? These questions were not addressed in this study, however, when acknowledging the use of literacy intervention in schools, this could play a role in impacting on student outcomes warranting further research.

6.4 Research Question 2 – What other factors might affect reading and writing for preparatory students in rural Tasmanian schools?

The semi-structured interviews and teacher or caregiver questionnaire data indicated that there were other factors that might influence reading and writing outcomes for students. Interviews and teacher questionnaires pointed to student preparedness for school as being a growing concern across all schools involved in the study.

School C, a non-intervention school, tended to stand out as showing different trends to the other three schools. This school's respondents to the caregiver questionnaire had a higher percentage of single carers at home, these preparatory students were in smaller families and were more likely to be the eldest, less had attended preschool, all children went to kindergarten and made the least use of the town library. When comparing 'at home' activities, these (School C) children played noticeably less computer and video games and markedly less time using outdoor equipment.

6.4.1 Intervention versus non-intervention schools.

Intervention school caregiver questionnaire responses showed more awareness of oral language than non-intervention caregivers, yet, this was not reflected in the greater gains in student outcomes. Intervention schools returned more caregiver questionnaires than non-interventions schools, so there may not have been a true representation of awareness due to the return rate. Intervention school caregivers indicated more time was spent in conversations with adults and less time playing electronic or mechanical games indoors or outdoors. The momentum and focus on oral language at intervention schools may have been an example of the 'Hawthorne effect' at work, where there is a tendency for some individuals to work harder when

they are taking part in an experiment. This raises questions regarding the quality of interactions and conversations at home together with family perceptions related to ‘knowing others’ role in developing expressive and receptive language skills in the home context as described by Raban (1999). Caregiver beliefs about reading to children and the importance placed on literacy and becoming literate also play a role as researched by AIFS (2011) and Hart and Risley (1995).

Non-intervention school caregivers showed more variance in responses with more than three hours per day spent playing indoor games, which could have resulted from the time of year the questionnaire was completed, the end of winter. Non-intervention school caregivers also indicated the least amount of time using computer, electronic or mechanical equipment in or outdoors. From Table 5.9, it can be seen that both non-intervention school caregivers noted 100 per cent use of the school library and School D the highest usage of the town library or 71 per cent. School C use of the town library was the lowest, however, this school was 10 kilometres from the nearest major city centre and one might infer that the home libraries were more extensive than those closer to alternatives.

6.4.2 School performance.

Non-intervention School C students showed greater mean gains more consistently across the different assessment measures than the other schools. School C caregiver questionnaire responses can be classified below by reading related activities, family situation, preschool opportunities and family activities which show notable differences in:

Reading Related Activities

- 8.4 books were read at home per week (highest across all schools);

- the least use of town library (37%), perhaps indicating more books at home.

Family Situation

- highest percentage (32%) were the only child in the home, perhaps indicating more opportunities for adult conversations;
- highest percentage of students were the eldest child in their family (79%);
- families were smaller (1 to 3 children).

Preschool Opportunities

- all students attended kindergarten;
- 89% attended paid childcare.

Family Activities

- more children participated in conversation with adults for more than three hours per day;
- least time was spent playing computer or video games (less than ½ hour/day);
- least time involved electric or mechanical equipment in outdoor activities.

These notable differences may explain some of the outstanding results in reading and writing tasks, especially in the light of Hart and Risley's (2003) data regarding exposure to words of language experience (Table 2.2).

Intervention School A, where all preparatory students received the oral language intervention program, showed the least mean gain made by students. Caregiver questionnaire responses indicated noteworthy differences from the other schools in:

Reading Related Activities

- 6.4 books were read with child at home each week (least across all schools);

- the lowest use of school library (94%), (all school students had access in school timetabling). These low scores may suggest limited caregiver interest or emphasis on reading related activities.

Preschool Opportunities

- the lowest percentage of students attended paid childcare (59%);
- the lowest percentage attended preschool (59%);
- the lowest percentage attended kindergarten (88%).

These lowest opportunities prior to starting full-time schooling may indicate a limiting of preparedness for school and together with the second lowest ICSEA of 980 (Table 4.2) may impact on student prior to school learning.

6.4.3 ‘Average’ versus ‘at risk’ students.

The qualitative data were not collected on a basis of ‘average’ or ‘at risk’ students. There is no way of connecting individual questionnaire responses to individual families or student groups. Although no direct connections can be drawn due to the anonymous nature of the student’s reading and writing data and caregiver questionnaires, the semi-structured interviews suggested that there was a relationship between student outcomes and SES. The state-wide *Kids Come First* (2009) and TasCoss (2009) data indicated that Tasmania has some of the poorest electorates in Australia alongside the information that approximately 50 per cent of Tasmanian adults do not have functioning literacy and numeracy skills. These data point to the importance of further investigation and initiatives of early years’ students in the north west of the state that might be impacting on some student’s literacy outcomes.

6.5 Summary

In evaluating how an oral language intervention program can impact on literacy acquisition it was noted in this study that ‘at risk’ students did not achieve the desired improvement. However, most ‘average’ students made gains in oral language, reading and/or writing measures.

The ‘average’ and ‘at risk’ students selected for this study were identified by class teachers and the early years’ literacy teams in each of the four schools. There were no set criteria and, therefore, this selection process may have impacted in the variation in results.

By comparison School C (non-intervention school), already using Clay’s (2000) theory of a flexible literacy processing system and ‘knowing others’ to reduce literacy group size, had adopted the underlying philosophy and structure of Marion Blank’s levels of questioning showed noteworthy improved student outcomes. This school used oral language and questioning knowledge to develop a model that fitted their purpose and resources with the expectation that all staff were commitment to its success. Therefore, it could be asked - did Schools A and B have the same level of knowledge, skill and clarity of focus from all staff?

Questioning, one of the underlying methodologies of the study – duration, opportunities, delivery and resourcing, might be considered. The six months between student assessments may not have been long enough to show measureable gains for the ‘at risk’ students. The learning experiences provided to ‘at risk’ students might not have been adequate for students with limited experience of discourse, books or other literacy opportunities.

School A's delivery of the oral language intervention program to all preparatory students was endeavouring to address a recognised deficit identified by the KDC and PIPS data. This approach created additional literacy opportunities for all preparatory students, though, this may have taken a narrow or deficit view of the issue. The provision of 'an intervention program' where all students got extra oral language possibilities did not impact adequately on reading and writing development. The oral language team ('knowing others') went into classrooms in School A for 30 minutes, three times each week and, therefore, students may have seen these activities as disconnected from their daily program. The sessions were enjoyed by students and small-sized groupings ensured engagement and student accountability; however, the purposefulness, at least from the students' perspective, may have been insignificant. At School B, 'at risk' students were withdrawn from the class one day per week, with some students being withdrawn twice in the same day. This delivery may not have been the best model for maximum benefit for 'at risk' students to make connections to daily literacy tasks. Connectedness to the daily literacy program was a distinguishing feature of School C's approach.

School C used levelled guided reading texts together with children's picture books. These levelled texts would have been independently readable by the students while the complexity of vocabulary and structure in picture books may have limited independent access to text meaning by students. This may indicate the importance of repeated opportunities to read the same text, hence practice strategies, in leading to reading improvement.

Classroom teachers, speech pathologists and an oral language specialist teacher in School A, together with caregiver feedback indicated that children were engaging in sustained, complex interactions with adults that had previously not been encountered

in the intervention schools. There were notable statistical improvements (Chapter 5) in student understanding of the concepts of print in literature, their questioning of teachers and literature in book discussions and associated activities together with their ability to talk about and manipulate the sounds in words. However, the standard assessment tools used by in this research may not have been able to sufficiently measure the gains made in reading and writing outcomes, particularly by the ‘at risk’ students.

Raban and Ure’s (2001) claimed that teacher formed expectations of early learners and then limited the experiences they provide to the perhaps ‘at risk’ students may have a bearing on the limited progress made by the students in the intervention School A. The work of Fountas and Pinnell (2001) indicated that having high expectations of struggling learners, while considering what they can accomplish, showed to the child a belief that they can perform, so they find ways to achieve tasks. Fountas and Pinnell (2001) also noted:

“.....some students have not been able to learn the ‘language of instruction’. They are not less intelligent or less creative than other students: they simply do not understand what their teacher is asking of them....But when students do not achieve, it is the school that has failed them” (p. 111).

There continues to be awareness in Early Years’ education literature as well as Tasmanian DoE documents, of the concern for low oral language development in students entering schooling. There are numerous approaches in place across schools in Tasmania from ‘investigative play’ to prior to school programs, such as *Launching into Learning* or *HIPPY*. This research has emphasised the importance of classroom interactions and the role teachers and ‘knowing others’ play in engaging young

learners in rich opportunities and experiences to talk. The priority becomes making 'talk' as powerful as possible to lead learners to the independent 'inner speech' described by Wells (1986). The research also called attention to the role ongoing reflection and professional learning played in teacher practice with the collection of observation and assessment data and its analysis. Together with learning the skills to modify and adjust teacher language to prompt learners to generate and extend ideas, question and clarify, hypothesise, justify and imagine, that is, providing the opportunities to develop complex thoughts.

Chapter Seven

Conclusion

7.1 Introduction

This final chapter summarises the intervention approaches, schools, teacher professional learning and pedagogy, students, home environments and social status (7.2). It reviews the overall effectiveness of the oral language intervention program and underlying beliefs, expectations and future challenges (7.3). During this study further questions have arisen from the intervention program, methodology and findings (7.4). In the summary (7.5), the findings of this study highlight the need to reflect on the teacher's role in providing strategic intentional teaching and learning enabling success for all.

7.2 Evaluating the Common Themes

The effect of the researched oral language intervention program on reading and writing for preparatory students in four rural Tasmanian schools was not clearly evident from the data gained in this research. Even though the program was founded in the best pedagogical practice of Clay and Blank together with evidence-based research, these data showed limited measureable change in student outcomes across a number of oral language, reading and writing assessments that could be attributed to the Oral Language Intervention Program. .

There were a number of variables across the study schools in school beliefs, teacher and para-professionals understanding, knowledge and understandings as well as student home environment that were measured. This first full year of schooling, by

its nature, has a profound effect on student learning and outcomes. Therefore, finding appropriate measures of changes in student outcomes may be a limitation of the data from this research.

The slight improvement in outcomes in reading and writing for 'at risk' preparatory students involved in this research may have resulted from these students being identified as 'at risk' and perhaps limiting the influence of their first full year of schooling. Perhaps as a consequence of being identified as below their peers, teachers at the individual schools were more aware of the need to make greater gains with these students and, therefore, other resources were utilised. By contrast, the substantial outcome gains made in reading and writing for most 'average' preparatory students were noteworthy and these gains were consistent with the expectations of the majority of preparatory students in relation to the Tasmanian Curriculum learning achievement standards.

Information from teacher questionnaires and interviews indicated that there was a substantial change in teacher awareness of oral language in intervention schools and this may have impacted on planning and presentation of literacy resources and environments, both in the classroom and by oral language specialists. This shift in teacher knowledge and practice is likely to have an impact, particularly as teachers gain a deeper awareness and understanding of the changing influences on student expressive and receptive language. This increasing awareness would continue to develop their individual repertoire of resources, strategies and skills to enrich the opportunities they provide for the students they work with in classrooms or other contexts as their understandings consolidate. However, due to the teacher learning

there might be a delayed impact on teacher effectiveness in this area as teacher interaction build in value and efficiency.

7.3 Future Challenges

The results of this study do raise further questions: The ongoing professional learning opportunities for teachers and those working with students in classrooms continue to be restricted by budgets and timetabling. However, educator's knowledge and beliefs are implicit in providing effective and innovative opportunities for students.

- Has teacher awareness of oral language led to richer opportunities and interactions in the classroom?
- Were teachers providing effective interactions as they become 'consciously competent' in the understanding and use of the levels of 'Blank's questioning'?
- How do teacher skill and flexibility in questioning of students, and their practice, continue to develop?

It is also possible that the notion of intervention in the first full-time year of schooling may have been too hasty.

- Do additional opportunities need to be provided to all students to give more support to those students 'at risk' within preparatory classrooms, therefore, providing a more integrated approach at this level of early schooling?
- If the gains were minimal in the preparatory year, did gains become more measurable in subsequent years, after the intervention program?
- What impact did 'at risk' student attendance and compliance has on the data?
- How often were students reading and writing throughout the school day?

Resources

- Does the types of texts used, picture books or guided reading texts, impact on student ability to engage with the text, make meaning and ask questions as they listen or read?
- Did the use of the *Guided Reading* approach facilitate more independent reading experiences where picture books restricted these opportunities?
- Do all books, especially some teacher favourites, have the same relevance or appeal to all students irrespective of socio-economic status?

There are a number of factors which may have impacted on this research in the educational context of this study:

- sample size was linked to four rural north west Tasmanian schools;
- small number of teachers or para-professionals involved across four schools;
- the identification of ‘at risk’ or ‘average’ students was a school-based, teacher decision with no set criteria to support the selection process;
- ‘at risk’ and ‘average’, as terms, are open to teacher interpretation. This may have influenced the grouping of students and teacher choices might have been considered in relation to this year’s cohort of students or to past preparatory student cohorts.
- the high degree of variability of student homes, experiences and attitudes;
- literacy resourcing at four schools outside the oral language intervention program was not measured.

Anecdotally, Tasmanian school administrators and teachers continue to indicate that the number of students whose preparedness for school is low and continues to grow.

The KDC and PIPS gives some statistical indication that this is correct, together with

the *Outcomes in the Early Years: the State of Tasmania's Young Children 2009 Report*. Are we, as educators, expecting more of students at entry to school?

Whatever the reason, leaders in education continue to search for initiatives and investigate research-based, independently-tested innovations to support classroom and early years' educators and caregivers in this area to foster interest and engagement in language, in books and in writing.

Learning to read and write are complex processes, where there is no 'quick fix' or single approach that works for all. Educators must continue to make astute and sensitive observation of the students with whom they work. By using the child's strengths rather than deficits to plan for and create rich, open-ended opportunities in literacy. These together with purposeful interactions and explicit instruction in supportive environments and in a variety of contexts will allow successful encounters to bring their own incentives.

7.4 Recommendations arising from the Research

The findings from this study have raised some questions: Systems and schools often do not have the time or resourcing to pursue further investigation. As oral language is an area of ongoing concern of administrators, language specialists, teachers, and some caregivers too, research should continue. Some possible areas might be:

- Tracking the students involved in this study into primary grades. These study students were involved in 2011 - Year 3 NAPLAN data. This may show a delayed impact of the oral language intervention program on student expressive and receptive language, vocabulary and comprehension.

- Trialling the use of levelled guided reading texts (with simpler vocabulary) as the focus for levelled 'Blank's questioning' to be used in addition to picture books. Using texts that students can fully engage with, through independent reading, may provide the sense of achievement and feedback to promote further risk-taking, problem-solving and empowerment in reading.
- Making explicit connections for students between the phonological awareness activities, books and classroom activities allows students to use their experiences and knowledge to build new learning. These connections support reflection and teach students to be strategic rather than thinking they have to remember new things.
- Integrating levelled 'Blank's questioning' throughout daily classroom programs may generate and support thoughtful discussion and help students develop a habit of questioning, inquiry and being critically reflective.
- Focusing on teacher professional learning, their beliefs and practice in rich opportunities and time to talk in classrooms. Building collaborative and safe environments for teacher learning and reflective practice develops a common language to analyse student learning, quality conversations about data and fosters a climate for continual improvement always with the intent to improve student outcomes.
- Regular opportunities to reflect and refine approaches to build teacher understandings and a shared purpose as well as shared responsibility and a team approach. Making a commitment to teachers, as lifelong learners, in professional learning communities is supportive and creates a shared vision for all students to reach their full potential.

7.5 Summary

The complexity of learning language and the transition to reading and writing cannot be understated. Language is a part of all we do and this becomes more critical when children enter the education system. The recent focus nationally is tending to see the early years of life more from an educational perspective with the new programs and licensing in child care facilities together with ‘birth to eight’ and ‘birth to four’ initiatives prior to beginning school being implemented in the Tasmanian context.

The literature reviewed emphasized the priority given to preparing children for the education system as they move from the contextual conversations of their home environments to the more de-contextualised experiences within classrooms and schools. In north western Tasmania, the *Early Years Outcomes Framework* (DEEWR, 2009) “highlights the difficult beginnings for some children, compromising both their futures and the social and economic well-being of us all” (p. 6). Education is at the heart of teaching and learning, and the role of educators is to give voice to those who struggle in dynamic classroom communities. The Melbourne Declaration (MCEETYA, 2008) calls attention to ‘active and informed citizens’ as good communicators and being collaborative and inquiring successful learners. Tasmanian educators will do well to be guided by the Department of Education’s vision (2011) to set all students on this pathway to becoming *successful, skilled and innovative Tasmanians* by having high expectations for all students in communication and oral language.

Final Word

A personal reflection

In 2011, the students involved in this study were in Grade three and, therefore, participated in National Assessment Program – Literacy and Numeracy (NAPLAN) in May. Monitoring individual study students from the four participating schools was possible through Learning Services North West data.

The 2011 NAPLAN – Reading data confirms teacher selection of student across the four schools as ‘average’ or ‘at risk’ in most cases. Four outliers are still detectable. The NAPLAN data showed two key features. Firstly, the transient nature of ‘at risk’ students in NW Tasmania with 20% of ‘at risk’ students involved in the study no longer at their original schools. This student mobility exceeds the similar measure in Reading Recovery Tasmania data, where transient students are highly represented in LSNW (5%). Of the ‘average’ students 16% have moved. Secondly, School A’s initial concerns for this cohort of students remain evident as 79% achieved the minimum standard in Reading while the same cohort achieved the minimum standard: in Grammar and Punctuation - 93%, Spelling - 93% and Persuasive Writing - 96%. There are still concerns for this cohort in reading and comprehension.

The challenge exists for educators to equip students to comprehend texts students read. Schools cannot change student home environments, however, by changing teaching and learning opportunities in school, becoming more skilled at asking questions, and extending meaningful interactions with students, may improve vocabulary and comprehension. This alongside teacher reflection and collegial dialogue will stimulate independent and reflective citizens.

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APPENDIX A.

**University of Tasmania's
Human Research Ethics Committee
Network Approval – H9922**

COPY

Private Bag 01 Hobart
Tasmania 7001 Australia
Telephone (03) 6226 2764
Facsimile (03) 6226 7148
Marilyn.Knott@utas.edu.au
<http://www.research.utas.edu.au/index.htm>



MEMORANDUM

<http://www.research.utas.edu.au/index.htm>

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

MINIMAL RISK ETHICS APPLICATION APPROVAL

19 March 2008

Professor John Williamson
Education
Private Bag 1307
Launceston

Ethics reference: H9922

'How does oral language impact on literacy acquisition? A study of the role of Oral Language skills in the development of reading and writing in Prep students in the Tasmanian context'.

Student: Sally Rowlands (M Ed)

Dear Professor Williamson

Acting on a mandate from the Tasmania Social Sciences HREC, the Chair of the committee considered and approved the above project on 17 March 2008.

All committees operating under the Human Research Ethics Committee (Tasmania) Network are registered and required to comply with the *National Statement on the Ethical Conduct in Research Involving Humans* 1999 (NHMRC guidelines).

Therefore, the Chief Investigator's responsibility is to ensure that:

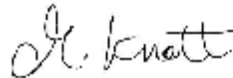
- 1) All researchers listed on the application comply with HREC approved application.
- 2) Modifications to the application do not proceed until approval is obtained in writing from the HREC.
- 3) The confidentiality and anonymity of all research subjects is maintained at all times, except as required by law.
- 4) Clause 2.37 of the National Statement states:
An HREC shall, as a condition of approval of each protocol, require that researchers immediately report anything which might warrant review of ethical approval of the protocol, including:
 - a) *Serious or unexpected adverse effects on participants;*
 - b) *Proposed changes in the application; and*
 - c) *Unforeseen events that might affect continued ethical acceptability of the project.*

The report must be lodged within 24 hours of the event to the Ethics Executive Officer who will report to the Chairs.

A PARTNERSHIP PROGRAM IN CONJUNCTION WITH THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

- 5) All participants must be provided with the current Information Sheet and Consent form as approved by the Ethics Committee.
- 6) The Committee is notified if any investigators are added to, or cease involvement with, the project.
- 7) This study has approval for four years contingent upon annual review. An Annual Report is to be provided on the anniversary date of your approval. Your first report is due [12 months from 'Ethics Committee Approval' date]. You will be sent a courtesy reminder by email closer to this due date.
Clause 2.35 of the National Statement states:
As a minimum an HREC must require at regular periods, at least annually, reports from principal researchers on matters including:
 - a) Progress to date or outcome in case of completed research;
 - b) Maintenance and security of records;
 - c) Compliance with the approved protocol, and
 - d) Compliance with any conditions of approval.
- 8) A Final Report and a copy of the published material, either in full or abstract, must be provided at the end of project.

Yours sincerely



Ethics Executive Officer

APPENDIX B.

Tasmanian

Department of Education

Research Approval Letter

(with school names masked).

Department of Education
EDUCATIONAL PERFORMANCE SERVICES

2/99 Bathurst Street, Hobart
GPO Box 169, Hobart, TAS 7001 Australia



File: 710816

18 April 2008

Professor John Williamson
University of Tasmania
Locked Bag 1307
LAUNCESTON TAS 7250

Dear Professor Williamson

How does oral language impact on literacy acquisition? A study of the role of oral language skills in the development of reading and writing in prep students in the Tasmanian context

I have been advised by the Educational Performance Research Committee that the above research study adheres to the guidelines established and that there is no objection to the study proceeding.

Please note that you have been given permission to proceed at the following primary schools: [REDACTED] and possibly [REDACTED]. However this permission is given at a general level only, and not at individual school level, you must still seek approval from the principal of the selected schools before you can proceed in these schools.

A copy of your final report should be forwarded to Patricia Lloyd, Educational Performance Services, Department of Education, GPO Box 169, Hobart 7001 at your earliest convenience and within six months of the completion of the research phase in Department of Education schools.

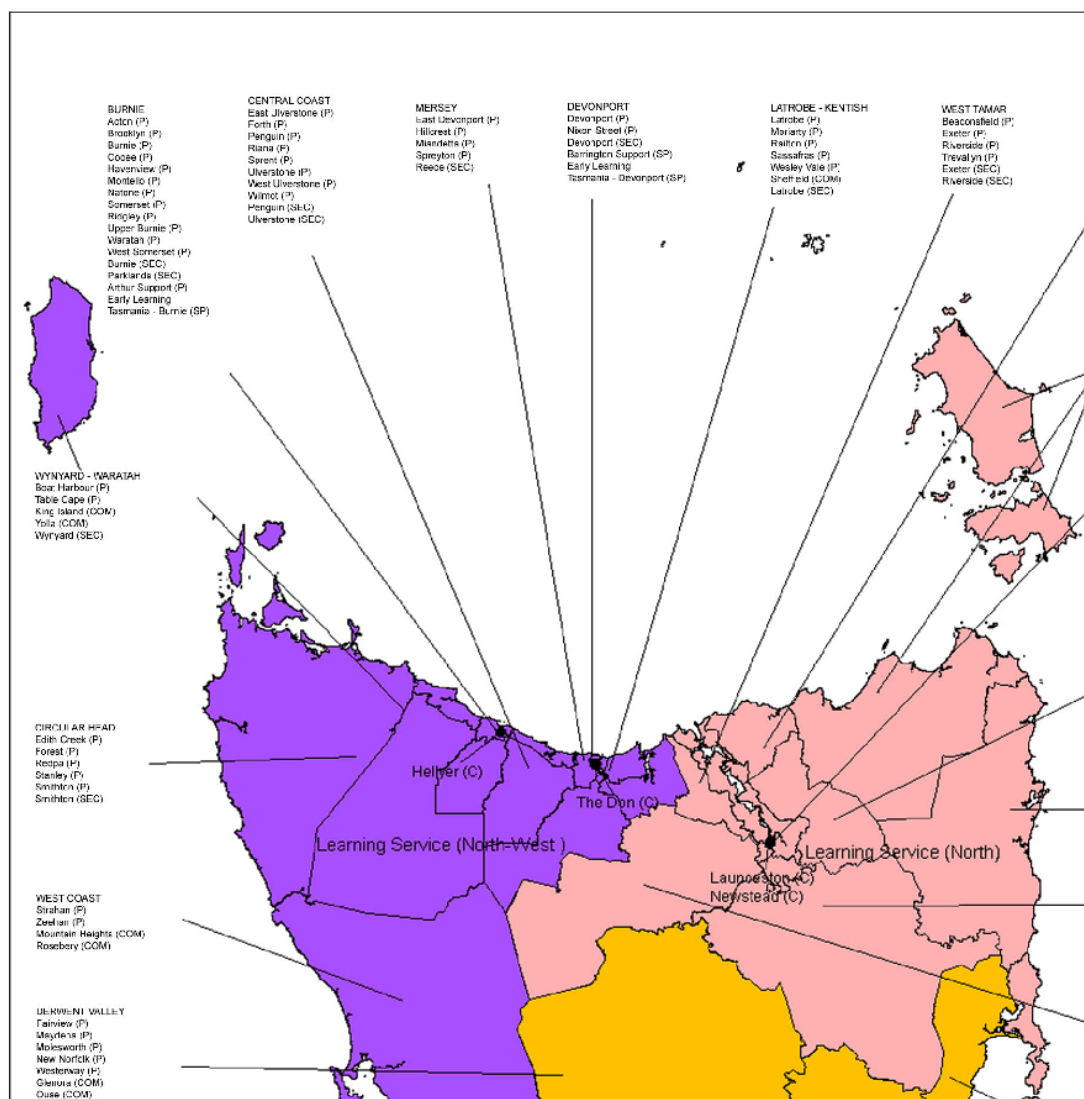
Yours sincerely

Manager
(Educational Performance Services)

Cc Sally Rowlands

APPENDIX C

Map of Tasmanian Education Department schools by Learning Services



APPENDIX D.

Kindergarten Developmental Check

Kindergarten Development Check

Photocopy Master - Individual Assessment

| | |
|---------------------|------------------------------------|
| Name: | Date of Birth: |
| School: | Teacher's Name: |
| Date Check 1: | Date Check 2 (if necessary): |

Note: The Critical Markers are aligned to the *Tasmanian Curriculum Framework* and are an early check for appropriate development.
They should be used in conjunction with relevant support materials.

| Critical Marker | Description | Check 1 | | Check 2 | |
|-----------------------|---|---------|----|---------|----|
| | | Yes | No | Yes | No |
| Thinking | | | | | |
| TH1 | Predicts and understands; what do you think will happen next?; What will happen if? | | | | |
| TH2 | Asks questions, (productive mode) e.g. Who?, What's that for?, When?, Why?, How? | | | | |
| TH3 | Draws a person with a head (including 2 or 3 facial features), arms and legs. | | | | |
| TH4 | Responds to questions, (receptive mode) e.g. Who?, What's that for?, Where? | | | | |
| Literacy and Numeracy | | | | | |
| EL1 | ***Talks fluently without stuttering. | | | | |
| EL2 | ***Uses normal voice and pitch. | | | | |
| EL3 | Recognises first name in print. | | | | |
| EL4 | Speaks in a manner that can be easily understood by adults. | | | | |
| EL5 | Recounts a personal experience in logical sequence. | | | | |
| MN1 | Counts to 5 with 1:1 correspondence. | | | | |
| MN2 | Can copy and continue a pattern using two items. | | | | |
| MN3 | Can complete an 8-12 piece jigsaw puzzle. | | | | |
| Health and Wellbeing | | | | | |
| HW1 | Engages in imaginative play. | | | | |
| HW2 | Separates comfortably from parent/carer. | | | | |
| HW3 | Gross Motor: Use the 13 original markers to inform a global judgement. | | | | |
| HW4 | Constructs a model with 4-8 interlocking pieces using for example, Duplo or Lego. | | | | |
| HW5 | Copies a cross within a circle. | | | | |
| HW6 | Is independent in their toilet routine. | | | | |
| HW7 | Sustains attention to complete a variety of tasks. | | | | |
| HW8 | Understands most classroom instructions (at least 3 stage instructions). | | | | |
| HW9 | Increasingly cooperates with other students in extended play situations. | | | | |

*** All students should be assessed against these two markers early in the year and at the latest, before Easter. Students who do not achieve a YES against these indicators must be referred immediately, with parental consent, to the Speech Pathologist who can be contacted through the Learning Services Office.

| | |
|--|---|
| Additional Comments/Referrals: | The student has been referred to: Guidance <input type="checkbox"/> Speech <input type="checkbox"/> Other <input type="checkbox"/> |
|--|---|

APPENDIX E.

Preparatory Class teacher

Oral Language Checklist

(used in School A and B)

[illegible]

APPENDIX F.

Pilot Intervention Trial Program

and

Results - Kindergarten

Appendix F: Pilot Intervention Trial Program – KINDERGARTEN

Funding was allocated for a 15 week trial of ADOLF and purchase of a resource outlining the program and providing Blanks' questioning scripts, assessments and guidelines of ADOLF.

The two teachers implementing the trial, tabulated data on identified 'at risk' Kindergarten and Preparatory students by administering the pre-test. These assessments were scored to group students according to their level of ability. The teachers collected and produced resources for the trial with students beginning term 3, week 1, 2007. It was decided to focus on three small groups of four students within the Kindergarten classroom or remove three groups of five students from the three Preparatory classes.

Kindergarten Trial

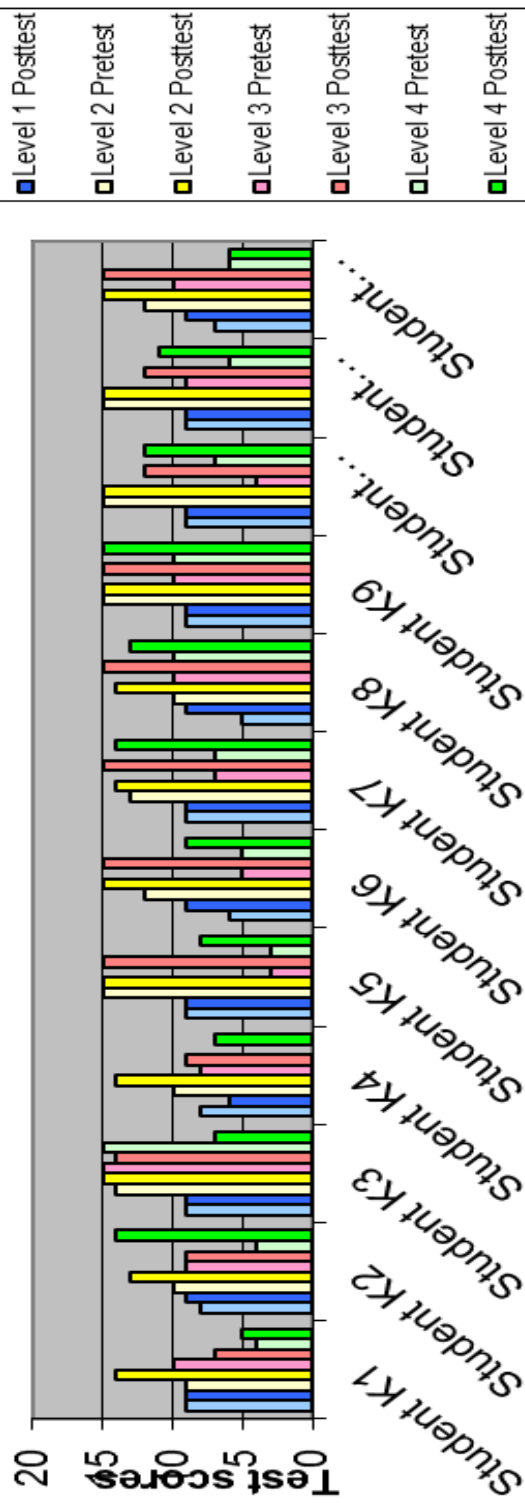
Two, thirty minute sessions were provided to three groups of four Kindergarten students (aged 4½ - 5½ years old) each week, within the Kindergarten areas in the afternoons, by a specialist teacher. This format was used due to the specialist teachers previous work commitments. The activities involved:

Table: Kindergarten trial intervention outline

| Session | Kindergarten Activities | Purpose depending on picture book used |
|----------------|--|---|
| One | Reading classroom/library picture book and using Blank levelled questions to ... | <ul style="list-style-type: none">•clarify book vocabulary,•discuss story meaning ie. plot, setting, characters,•discuss concepts in books and print awareness,•develop prediction skills,•model reading skills |
| Two | Activity Session (eg. paper, cooking or craft) tailored to session one picture book to re-use the Blank levelled questions and to .. | <ul style="list-style-type: none">•retell the story,•sequencing story/ ordering events,•clarify book vocabulary & develop student oral vocabulary,•story comprehension•sustained conversations/interactions•activity methods & concepts•co-operation & sharing skills |

See Appendices AA & BB for levelled question scripts, Appendix CC Activity Session examples

Kindergarten Pilot Oral Language Intervention Trail



APPENDIX G.

Pilot Intervention Trial Program

and

Results - Preparatory

Appendix G: Pilot Intervention Program - PREPARATORY TRIAL

Preparatory students received five, 30 minute sessions over a fortnight due to the trial teacher's prior teaching commitments. Identified 'at risk' students were placed in three small, ability groups of five students and sessions were conducted after lunch in a separate space outside the student's classroom. Five sessions were scheduled in a fortnight for each group of students.

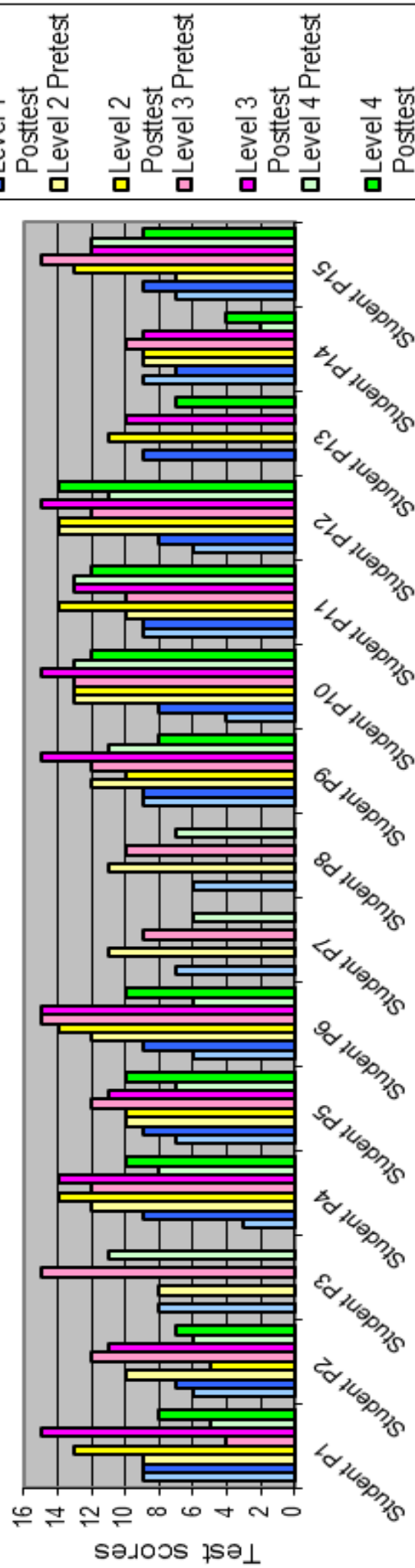
Table: Preparatory trial intervention outline

| Session | Preparatory Activities | Purpose |
|----------------|---|---|
| One | Reading picture books with the use of Blank questions at Level I and II | <ul style="list-style-type: none">• clarify book vocabulary,• picture book meaning,• discuss concepts in books,• develop prediction and semantic skills,• model reading skills |
| Two | Activity Session (eg. paper, cooking or craft) tailored to Session One picture book to re-use the Blank levelled questions and to .. | <ul style="list-style-type: none">• story retell,• sequencing story/ ordering events,• use book vocabulary & develop student vocab.,• story comprehension• grammar and syntactic skills• use and develop descriptive language• activity methods & concepts• co-operation & sharing skills• model & focus student's attention on correct speech forms in the context of small groups |
| Three | Phonological awareness session eg. using games and activities to emphasise syllabification, rhymes, beginning and end sounds, segmentation and blending, etc. | <ul style="list-style-type: none">• develop phonological awareness• practise listening and speaking skills• create meta-linguistic opportunities, where possible |
| Four | Reading a NEW classroom or library picture books with the use of Blank questions | As above session one |
| Five | Activity Session (eg. paper, cooking or craft) tailored to Session Four picture book to re-use the Blank levelled questions and to .. | As above session two |

See Appendices AA & BB for levelled question scripts, Appendix CC Activity Session examples

Detailed lesson plans of sessions were made by the oral language teacher and were kept with observation notes of individual student's involvement and progress. Observations were also made by the class teachers and senior staff as a basis for reflection on the intervention along with data of student outcome gains over the 15 weeks.

Preparatory Pilot Oral Language Trial



**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix H.pg 170

Executive Summary Report by School A after the Pilot Oral Language
Intervention Trial 2007 (School name substituted with research title
to maintain confidentiality).

APPENDIX I.

School A's Literacy Plan for 2008 Speaking and Listening

STUDENT SUPPORT AND SUPPORT FOR PERSONALISED LEARNING SPEAKING AND LISTENING – RIPPLES 2008

To promote positive performance and meet the learning needs of all students: particularly in the areas of English Literacy, Maths Numeracy and Personal Wellbeing.

PROMOTING POSITIVE PERFORMANCE

| HISTORICAL DATA | | 2007 DATA | RESULTS/GOAL | TARGET |
|---|--|--|--|--------|
| KDC continuing to indicate decrease in key indicators for school readiness. | Ripples Trial – Kinder & Prep Low KDC – 65% at risk | <ul style="list-style-type: none"> Identify and intervene early with 'at risk' Prep students Decrease SP case loads More students reading & writing by end of Prep year - Benchmark | Teacher/staff professional learning Develop teacher & TA capacity | |

| DESIGN ELEMENT | PURPOSE/GOAL (Why?) | STRATEGY (What?) | IMPLEMENTATION (How?) | RESOURCES (Who/What?) | NEEDS/TARGETED (2008 Focus) |
|---|---|---|---|--|--|
| Use ADOLF features | <ul style="list-style-type: none"> Enable students to process questions, follow instructions and think at a higher level. | <ul style="list-style-type: none"> Blank's questioning (Level 1-4) Increased interactions in classroom context Phonological Awareness activities | <ul style="list-style-type: none"> Planned small group tasks three mornings per week (groups of seven children) therefore reduced 'pupil-teacher' ratio. Scaffolding student thinking to achieve higher levels of reasoning via explicit teaching. Modelled reading where "Reading should sound like talking" PL facilitated by Speech & Language team to increase teacher expertise. | Assistant principal, Oral language specialist teacher | <ul style="list-style-type: none"> Explicit teaching practices support students to engage more deeply their literacy program and to be more accountable for their learning. |
| LSNW Speech pathologist as consultants | <ul style="list-style-type: none"> Support students to engage in structured learning opportunities to improve their verbal reasoning. | | | Speech pathologists (SP) LSNW Literacy Facilitator | <ul style="list-style-type: none"> Reducing the pupil – teacher ratio supports students to take a more active role in developing their thinking skills. |
| Collect data to assess viability for oral language intervention at school | <ul style="list-style-type: none"> Promote the concepts "What did I learn? How did I learn?" via verbal reasoning Develop/extend vocabulary and contextual interactions | | | Oral Language Teacher Aide (TA) Prep class teachers & TAs • Picture books sets • Blank's questioning scripts • Phonological awareness activities | <ul style="list-style-type: none"> Collating data (PIPS, Auditory Processing, Blank's pre-test- Qu test', etc.) informs teachers and influences planning |

**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix J.pg 175

Auditory Processing Assessment Department of Education and Training, Victoria. (2001). *Auditory processing assessment kit – Teacher notes*. Designed by ERC. The Royal Children’s Hospital, 060057.

**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix K.pg 179

Observation Survey Assessment

Clay, M. M. (2002). *An observation survey of early literacy*

achievement. (2nd ed.). Auckland, NZ: Heinemann Education.

Gilmore, A., Croft, C., & Reid, N. (1981). *Burt word reading test*.

Teacher Manual. Wellington, NZ: Lithoprint (NZ) Ltd.

**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix Lpg 193

Running Record Assessment

Clay, M. M. (2002). *An observation survey of early literacy achievement*. (2nd ed.). Auckland, NZ: Heinemann Education.

APPENDIX M.

Information Letter to Principals



UNIVERSITY OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3339
Fax: (03) 6324 3048
Date

INFORMATION SHEET (PRINCIPALS)

Project Title: *"How does oral language impact on literacy acquisition?"*

Name
School
Address

Dear

We would like to invite your school to be a part of a study to investigate the role of oral language skills in the development of reading and writing in Prep students. Four schools, including yours, in the [REDACTED] area, will be asked to be involved.

Data available from Tasmanian schools in relation to the development of reading and writing in the first year at school are very limited. This study, as an initial descriptive investigation, will provide some baseline data from which to explore the relationship between the development of the strategic activities used in reading and writing and oral language skills in the Tasmanian context. It is hoped that these data, while limited in scale, will provide direction to classroom practitioners, to school administrators, professional learning facilitators and policy makers. It will also provide you with detailed information and observations of selected Prep students, regarding their strengths and needs in early literacy skills.

There are two of us involved in this research team: Mrs Sally Rowlands, who will make contact with participants who have agreed to participate in the project, conduct interviews, and process and undertake preliminary analysis of the data. This project is being undertaken as part of the requirements for a Doctorate in Education by Sally. Professor Marion Myhill has worked with Sally during the design stage of the project. The final data analysis and writing of the final report for the Department of Education will be completed collaboratively by the two researchers.

We are seeking participations of 12 Prep students from your school. The group consisting of 6 boys and 6 girls, including 6 students assessed to be below the preferred PIPS results in your school and 6 students assessed as 'average' for the grade cohort to enable us to track progress. Participating students will be pre- and post-tested using standard Auditory Processing and Observation Survey assessments. All data obtained from your school's participants will be handled with confidentiality and will be available to you at the conclusion of the study. A

copy of the final report or a summary will be available if requested. We are also more than happy to discuss progress and the final findings with you and your staff, at a convenient time, if you would like.

All parents/carers of Prep students at your school will be invited to be involved and permission sought, so that those who ultimately do participate in the study, are not identifiable from within the school community. There will be a brief questionnaire to complete for those parents/carers wishing to be involved. The findings will be made available to any parent/guardian on request.

Prep teachers will also be approached to be involved by completing a questionnaire to share their classroom practice, organisation and expectations to explore the educational dimensions of this study. We would also like to shadow some teachers, if they are comfortable with this. We will provide more information about this if teachers from your schools are involved in this phase of the study.

We would like you to be involved by participating in an interview to discuss the school literacy plan and the role of oral language as well as your future literacy vision for your school. We anticipate the interview to take 30 to 45 minutes. All information gathered will be reported anonymously. If you agree to participate in an interview, you are entitled to decline to comment on any of the items. We would like to make an audio tape of the interview, with your approval. We will stop recording at any time if you wish. You will be given the opportunity to peruse a transcript of the interview, so as to edit or modify if necessary. Your identity or this recorded information will not be identifiable and your name will not appear in the resulting report, though your comments may be referred to in some form.

As with all involvement in research studies, your participation in the study is voluntary. If you decide to participate and subsequently wish to withdraw, you can do so without any penalty or prejudice. Furthermore, if you choose to participate in an interview you can withdraw while the interview is occurring and also withdraw any data you have provided. If you have any questions regarding the study please contact Sally at the email address below. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted you may contact the Ethics Executive Officer on 03 6226 7479 or human.ethics@utas.edu.au.

Thank you for considering your participation in the study.



Yours sincerely

Marion Myhill
Chief Investigator

Sally Rowlands
Chief Investigator

 Marion.Myhill@utas.edu.au

 Sally.Rowlands@education.tas.gov.au

 Locked Bag 1307, Launceston 7250  Locked Bag 1307, Launceston 7250

APPENDIX N.

Information Letter

to Parents/Caregivers of preparatory students



UNIVERSITY
OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3339
Fax: (03) 6324 304
Date

INFORMATION SHEET (PARENTS & GUARDIANS)

Project Title: *"How does oral language impact on literacy acquisition?"*

Dear Parent or Guardian,

You have been sent this letter through your child's school. We have used this method of reaching you because we have no information about students' or parents'/guardians' names or any personal details.

We are writing to parents and guardians of all Prep children at your school to invite you to be a part of a study to investigate the role of oral language skills in the development of reading and writing in Prep students. Four schools in the [REDACTED] area will be asked to be involved. We are seeking permission for your child to be involved.

There are two of us in this research team, Marion Myhill and Sally Rowlands. Marion Myhill is a Professor in Education at the Launceston Campus of University of Tasmania. Sally will be the person who is in contact with the schools and she will do the testing of the Prep students involved and distribute the questionnaires. This project is being undertaken as part of the requirements for a Masters in Education (Honours) by Sally.

Marion and Sally have reviewed the student tests, written the parent questions and they will work together to write the report about the trends evident from the data collected. The report will not include any student's name or details. The students who provide information will give the Department of Education very useful information for both student and teacher learning.

Information available from Tasmanian schools in relation to the development of reading and writing in the first year at school are very limited. This study will provide some baseline data from which to explore the relationship between the development of the strategic activities involved in reading and writing and oral language skills in the Tasmanian context. These data, while limited in scale, will provide direction to classroom practitioners, school administrators, professional learning facilitators and policy makers.

We are seeking participation from Prep students, boys and girls, from your school to track progress. Participating students will be pre- and post-tested using standard Auditory Processing and Observation Survey assessments. All testing will be done in school time. All data obtained from your school's participants will be confidential, with data available to your school only at the conclusion of the study. A brief report will be available, if requested, through your school at the completion of the study detailing the findings.

During the term, Sally will ask if you could find the time to complete a questionnaire to provide some background information on your child's experiences and home activities that relate to speaking and listening, reading and writing. The questionnaire will take approximately 30 minutes to complete. Your support in this area will provide additional information to ensure the credibility of this study.

If you have any questions regarding this study please contact Sally Rowlands on her email address below or leave your name at the school office and she will contact you. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted you may contact the Ethics Executive Officer on 03 6226 7479 or human.ethics@utas.edu.au.

Thank you for considering your participation in the study.


Yours sincerely,


Marion Myhill
Chief Investigator

Sally Rowlands
Chief Investigator

 marion.myhill@utas.edu.au

 sally.rowlands@education.tas.gov.au

 Locked Bag 1307, Launceston 7250
7250

 Locked Bag 1307, Launceston

APPENDIX O.

Information Letter

to Teachers of preparatory students



UNIVERSITY
OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3339
Fax: (03) 6324 3048
Date

INFORMATION SHEET (TEACHERS)

Project Title: *"How does oral language impact on literacy acquisition?"*

Name
School
Address

Dear

We are writing to invite you to be a part of a study to investigate the role of oral language skills in the development of reading and writing in Prep students. Four schools, including yours, in the [REDACTED] area will be asked to be involved.

Data available from Tasmanian schools in relation to the development of reading and writing in the first year at school are very limited. This study, as an initial descriptive investigation, will provide some baseline data from which to explore the relationship between the development of the strategic activities involved in reading and writing and oral language skills in the Tasmanian context. These data, while limited in scale, will provide direction to classroom practitioners, school administrators, professional learning facilitators and policy makers. It will also provide you with detailed information and observations of selected Prep students, regarding their strengths and needs in early literacy skills.

We wish to gather data from teachers through

1. A questionnaire, which all teachers who teach children involved in the study are invited to complete.
2. An observation in your classroom for one day, if you are comfortable with this.

There are two of us involved in this research team:

Mrs Sally Rowlands, who will make contact with participants who have agreed to participate in the project, conduct interviews, and process and undertake preliminary analysis of the data. This project is being undertaken as part of the requirements for a Masters in Education (Honours) by Sally. Professor Marion Myhill has worked with Sally during the design stage of the project. The final data analysis and writing of the final report for the

Department of Education will be completed collaboratively by the two researchers.

We are seeking participation from 12 Prep students from your school. The sample will contain 6 boys and 6 girls, including 6 students assessed to be below the preferred benchmark for reading in your school and 6 students assessed as 'average' for the grade cohort to enable us to track progress. Participating students will be pre- and post-tested using standard Auditory Processing and Observation Survey assessments. Sally will do all the testing of students at convenient times for teachers, so as to cause minimal impact on your daily classroom program. All data obtained from your school's participants will be available to you at the conclusion of the study. A copy of the final report or a summary will be available, if requested. We are also more than happy to discuss individual student assessments and the final findings with you, at a convenient time, if you would like.

All parents of Prep students at your school will be invited to be involved, so that those who ultimately do participate in the study, are not identifiable from within the school community. There will be a brief questionnaire to complete for those wishing to be involved.

We ask you to be involved by completing a questionnaire to share your classroom practice, organisation and expectations to explore the dimensions of this study. The questionnaire will take approximately 30 minutes to complete. Sally would also like to conduct an observation in your classroom for one day, if you are comfortable with this. She will provide more information about this when the study is underway, there is no compulsion to be involved in this phase of the study and believe it would be highly beneficial to validate the resulting data. All information gathered will be reported anonymously. If you agree to complete a questionnaire or participate in an interview, you are entitled to decline to comment on any of the items.


As with all involvement in research studies, your participation in the study is voluntary. If you decide to participate and subsequently wish to withdraw, you can do so without any penalty or prejudice. Furthermore, if you choose to participate in an interview you can withdraw while the interview is occurring and also withdraw any data you have provided. If you have any questions, at any time, please contact Sally on the email address below. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted you may contact the Ethics Executive Officer on 03 6226 7479 or human.ethics@utas.edu.au.

Thank you for considering your participation in the study.

Yours sincerely,


Marion Myhill
Chief Investigator

 marion.myhill@utas.edu.au

 Locked Bag 1307, Launceston 7250

Sally Rowlands
Chief Investigator

 sally.rowlands@education.tas.gov.au

 Locked Bag 1307, Launceston 7250

APPENDIX P.

Information Letter

to

Speech Pathologist and Oral Language teacher



UNIVERSITY
OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3339
Fax: (03) 6324 3048

INFORMATION SHEET (SPECIALIST STAFF)

Date

Project Title: *"How does oral language impact on literacy acquisition?"*

Name
School
Address

Dear

We are writing to invite you to be a part of a study to investigate the role of oral language skills in the development of reading and writing in Prep students. Four schools, in the [REDACTED] area have been asked to be involved.

Data available from Tasmanian schools in relation to the development of reading and writing in the first year at school are very limited. This study, as an initial descriptive investigation, will provide some baseline data from which to explore the relationship between the development of the strategic activities involved in reading and writing and oral language skills in the Tasmanian context. These data, while limited in scale, will provide direction to classroom practitioners, school administrators, professional learning facilitators and policy makers. It will also provide you with detailed information and observations of selected Prep students, regarding their strengths and needs in early literacy skills.

We wish to gather data through an interview with specialist staff who work with children involved in the study. It might also be helpful to observe you working with students at some point. There are two of us involved in this research team: Mrs Sally Rowlands and Professor Marion Myhill. Sally will make contact with participants who have agreed to participate in the project, conduct interviews, and process and undertake preliminary analysis of the data. This project is being undertaken as part of the requirements for a Masters in Education (Honours) by Sally. Professor Marion Myhill has worked with Sally during the design stage of the project. The final data analysis and writing of the final report for the Department of Education will be completed collaboratively by the two researchers.

We are seeking participation from 12 Prep students from each school. The sample will contain 6 boys and 6 girls, including 6 students assessed to be below the preferred benchmark for reading in your school and 6 students assessed as 'average' for the grade cohort to enable us to track progress. Participating students will be pre- and post-tested using standard Auditory Processing and Observation Survey assessments. Sally will do all the testing of students at times convenient to class teachers, so as to cause minimal impact on daily classroom programs.

All parents of Prep students at the schools were invited to be involved, so that those who ultimately participate in the study, are not identifiable from within the school community. There will be a brief questionnaire to complete for those wishing to be involved.

We ask you to be involved by participating in an interview. Sally will provide you with the questions prior to the interview. We anticipate the interview to take 30 to 45 minutes and will be conducted at a prearranged time. We believe your involvement in the study would be highly beneficial to validate the resulting data. All information gathered is un-named. If you agree to participate in an interview, you are entitled to decline to comment on any of the items. A copy of the final report or a summary will be available, if requested.


As with all involvement in research studies, your participation in the study is voluntary. If you decide to participate and subsequently wish to withdraw, you can do so without any penalty or prejudice. Furthermore, if you choose to participate in an interview you can withdraw while the interview is occurring and also withdraw any data you have provided. We would like to make an audio tape of the interview, with your approval. We will stop recording at any time if you wish. You will be given the opportunity to review a transcript of the interview, so as to edit or modify if necessary. You and this recorded information will not be identifiable and your name will not appear in the resulting report, though your comments may be referred to in some form.


If you have any questions please do not hesitate to contact Sally at the email address below. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted you may contact the Ethics Executive Officer on 03 6226 7479 or human.ethics@utas.edu.au.

Thank you for considering your participation in the study.

Yours sincerely,

Marion Myhill
Chief Investigator

 marion.myhill@utas.edu.au

 Locked Bag 1307, Launceston 725

Sally Rowlands
Chief Investigator

 sally.rowlands@education.tas.gov.au

APPENDIX Q.

Consent Form

for Parents/Caregivers of preparatory students



UNIVERSITY
OF TASMANIA

**STATEMENT OF INFORMED CONSENT
(PARENT/GUARDIAN)**

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3339
Fax: (03) 6324 3048
Date 16th August 2008

Project Title: *“How does oral language impact on literacy acquisition?”*

1. I have read and understood the ‘Information Sheet’ for this study.
2. I understand that the study involves my child being tested using an oral language and reading & writing assessment at the beginning and end of the study.
3. I understand that this research has received ethical approval from The Human Research Ethics Committee (Tasmania) Network which is constituted under the National Health & Medical Research Council. The committee under the HREC (Tasmania) Network use the National Statement on Ethical Conduct in Research Involving Humans to inform their decisions. The project also has the permission and support of the Tasmanian Department of Education, Learning Services Northwest.
4. I understand that all research data will be securely stored on the University of Tasmania premises for a period of 5 years. The data will be destroyed at the end of 5 years.
5. Any questions that I have asked have been answered to my satisfaction.
6. I agree that research data gathered for the purpose of the study may be published provided that my child cannot be identified as a participant.
7. I understand that my child’s identity will be kept confidential and that any information they supply to the researchers will be used only for the purposes of the research.
8. I agree that my child may participate in this study and understand that I may withdraw my approval at any time without any effect, and if I so wish, I may request that any data they have supplied be withdrawn from the research. In the case of written data I will need to provide their code and in the case of the interview, their pseudonym for the researcher to be able to remove the data.

I give my approval for my child to take part in.....

| | | |
|--------------------------|------------------------------|-----------------------------|
| Oral language test | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Reading and writing test | <input type="checkbox"/> yes | <input type="checkbox"/> no |

(please ✓ yes or no for each)

....and to complete a questionnaire for the researchers

| | | |
|---------------------------------|------------------------------|-----------------------------|
| Parent questionnaire (attached) | <input type="checkbox"/> yes | <input type="checkbox"/> no |
|---------------------------------|------------------------------|-----------------------------|

Name of student _____

Name of parent/guardian _____

Signature of parent or guardian _____ Date _____

Please return to your school by Friday 5th of September 2008.

APPENDIX R.

Consent Form

for Teachers of preparatory students



UNIVERSITY OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3291
Fax: (03) 6324 3048
Date 16th June 2008

STATEMENT OF INFORMED CONSENT (TEACHER)

Project Title: *“How does oral language impact on literacy acquisition?”*

1. I have read and understood the ‘Information Sheet’ for this study.
2. The nature and possible effects of the study have been explained to me.
3. I understand that this research has received ethical approval from The Human Research Ethics Committee (Tasmania) Network which is constituted under the National Health & Medical Research Council. The committee under the HREC (Tasmania) Network use the National Statement on Ethical Conduct in Research Involving Humans to inform their decisions. The project also has the permission and support of the Tasmanian Department of Education, Learning Services Northwest.
4. I understand that the study involves a questionnaire to share classroom practice, organisation and expectations to explore the dimensions of this study.
5. I understand that all research data will be securely stored on the University of Tasmania premises for a period of 5 years. The data will be destroyed at the end of 5 years.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered for the purpose of the study may be published provided that I or my school cannot be identified as a participant.
8. I understand that my identity will be kept confidential and that any information I supply to the researchers will be used only for the purposes of the research.
9. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish, I may request that any data I have supplied be withdrawn from the research.

Name of participant _____

Signature of participant _____ Date _____

Approval for: Please ✓

| | | |
|-------------------------------|------------------------------|-----------------------------|
| Questionnaire | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Observation in your classroom | <input type="checkbox"/> yes | <input type="checkbox"/> no |

Please leave in the school office in the envelope provided.

APPENDIX S.

Consent Form

for Principals,

Speech Pathologist and Oral Language teacher



UNIVERSITY OF TASMANIA

Faculty of Education
Locked Bag 1307
Launceston 7250
Phone: (03) 6324 3291
Fax: (03) 6324 3048
Date 16th June 2008

STATEMENT OF INFORMED CONSENT (PRINCIPALS & SPECIALISTS)

Project Title: *“How does oral language impact on literacy acquisition?”*

1. I have read and understood the ‘Information Sheet’ for this study.
2. The nature and possible effects of the study have been explained to me.
3. I understand that this research has received ethical approval from The Human Research Ethics Committee (Tasmania) Network which is constituted under the National Health & Medical Research Council. The committee under the HREC (Tasmania) Network use the National Statement on Ethical Conduct in Research Involving Humans to inform their decisions. The project also has the permission and support of the Tasmanian Department of Education, Learning Services Northwest.
4. I understand that the study involves an interview to provide a deeper dimension for this study and/or observation while working with students.
5. I understand that all research data will be securely stored on the University of Tasmania premises for a period of 5 years. The data will be destroyed at the end of 5 years.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered for the purpose of the study may be published provided that I or my school cannot be identified as a participant.
8. I understand that my identity will be kept confidential and that any information I supply to the researchers will be used only for the purposes of the research.
9. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish, I may request that any data I have supplied be withdrawn from the research.

Name of participant _____

Signature of participant _____ Date _____

Approval for: Please ✓

| | | |
|--------------------------------------|------------------------------|-----------------------------|
| Interview | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Observation working with students | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Audio taping of interview | <input type="checkbox"/> yes | <input type="checkbox"/> no |

Please leave in the school office in the envelope provided.

APPENDIX T.

Questionnaire

to Parents/Caregivers of preparatory students

Questionnaire to Parents

CODE

| | |
|--|--|
| | |
|--|--|

of Prep students participating in: A study of the role of Oral Language skills in the development of Reading and Writing in Prep students in the Tasmanian context.

Section A: Your Background Information

Please tick the appropriate box or write answers

1. Gender: Male ☐ Female ☐
 2. Age: Year of birth? _____
 3. Number of people living in your household
 4. List current ages of people living in your household from oldest to youngest (place a comma between each person's age)
-

Section B

Questions specific to your Prep aged child

Please tick the appropriate box or write answers

1. Gender of your Prep child
Male ☐ Female ☐
 2. Age of your Prep child in years and months
 years months
 3. What is your Prep child position in the family?
(eg. only child, 1st of 3 children 4th of 4 children, etc.)
-

4. Have you ever used paid child day care facilities for your Prep child?

Yes ☐ No ☐

5. Did your Prep child attend a preschool group?

Yes ☐ No ☐

6. Did your Prep child attend a kindergarten group?

Yes ☐ No ☐

7. Does your Prep child attend school on a regular basis?

Yes ☐ No ☐

8. Does your Prep child use the local town library?

Yes ☐ No ☐

9. Did your Prep child use the school library?

Yes ☐ No ☐

10. Do you read to your Prep child?

Yes ☐ No ☐

11. If yes, how many books do you read to them in a week?

_____ books Usually, what time of day? _____

12. Does your Prep child read with you or attempt to read with you?

Yes ☐ No ☐

13. Is the TV, most watched by your Prep child, in a family living area of your home?

Yes ☐ No ☐

14. Is the computer, most used by your Prep child, in a family living area of your home?

Yes ☐ No ☐

Section C

Please tick, in the appropriate box, for each of the statements below

Statements relate to AT HOME behaviours and average times

| Statement (a day refers to an average school day - before and after school) | Less than ½ hour | ½ to 1 hour | 1 to 2 hours | 2 to 3 hours | More than 3 hours |
|--|------------------|-------------|--------------|--------------|-------------------|
| 1. How much time in a day might your Prep child participate in conversations with an adult? eg. <i>at meal times, chatting about books, etc.</i> | | | | | |
| 2. How much time in a day might your Prep child spend playing indoor games (eg. <i>card games, board games, etc.</i>) not involving electronic equipment? | | | | | |
| 3. How much time in a day might your Prep child spend playing outdoor games (eg. <i>cricket, cubby houses, etc.</i>), not involving electronic equipment? | | | | | |
| 4. How much time in a day might your Prep child watch TV/videos/DVDs? | | | | | |
| 5. How much time, in a day, might your Prep child have to play computer or video games? | | | | | |
| 6. How much time in a day might your Prep child have to play outdoor games, involving electronic equipment? | | | | | |

Section D

For you to make some comments

- Are you happy with your Prep child's ability to participate in conversations with adults? Please explain.

2. Are you happy with your Prep child's ability in reading and writing? Please explain.

3. When you have family gatherings, is your Prep child involved with the conversations in the group or do they leave the gathering?

4. Do you expect your Prep child to be an average reader (the same as most of the children in the class)? Why?

5. Do you expect girls and boys in your family to read and write with the same level of competence?

Thank you for completing this survey.
Your assistance will be of great benefit to the study.

**Please return by reply paid post, in the envelope attached (no postage required),
by Friday 28th of November 2008**

APPENDIX U.

Questionnaire to Teachers of preparatory students

Questionnaire to Teachers

CODE

| | |
|--|--|
| | |
|--|--|

of Prep students participating in: A study of the role of Oral Language skills in the development of Reading and Writing in Prep students in the Tasmanian context.

Section A: Your Background Information

Please tick the appropriate box or write answers

1. Gender: Male ☐ Female ☐
2. Years of teaching experience in early childhood? _____
3. Number of Prep students in your class? _____
4. Gender split of your Prep class ____ Males ____ Females

Section B:

Classroom program

1. Describe your classroom literacy program (eg. whole language)

2. How are students grouped in your classroom? (eg. mixed ability groupings, similar ability groupings)

3. Have you found that either boys or girls are weaker in literacy skill development?

4. Comment on your expectations of student speaking and listening ability, at the beginning of the year and at the end of the year.

i. beginning of the year _____

ii. end of year _____

5. Comment on your expectations of student reading and writing ability, at the beginning of the year and at the end of the year.

i. beginning of the year _____

ii. end of year _____

6. Describe the opportunities that you provide for students to speak and listen (to adults & to peers) in your classroom.

7. Describe the opportunities you provide for students to read and write in your classroom.

Section C

Please tick, in the appropriate box, for each of the statements below

| Statement | Poor | Below average | Average | Above average | Excellent |
|--|------|---------------|---------|---------------|-----------|
| 1. How would you rank the speaking & listening resources in your school? | | | | | |
| 2. How would you rank the reading resources in your school? | | | | | |
| 3. How would you rank the writing resources in your school? | | | | | |
| 4. How would you rank your professional knowledge and understanding of speaking and listening? | | | | | |
| 5. How would you rank your professional knowledge and understanding of reading and writing? | | | | | |
| 6. How would you rank the level of professional support in these literacy areas? | | | | | |

Section D:

Your own opinion

1. Comment on the current emphasis given to Early Childhood speaking and listening standards in your school?

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins or other markings present.

223

APPENDIX V.

Semi-structured interview questions for the speech pathologist

Semi-structured interview questions for the

Speech Pathologist

in the cluster of schools participating in:

A study of the role of Oral Language skills in the development of Reading and Writing in Prep students in the Tasmanian context.

Venue: _____ Interviewee: _____

Date: _____ Time: _____

Interview preamble:

Hello I am Sally Rowlands and I am from the University of Tasmania's Faculty of Education. We are collecting information from professionals in the area on the role of Oral Language skills in the development of Reading and Writing in Prep students.

I hope this interview will take between 30 – 45 minutes but it is best to leave an hour just in case we get talking – are you prepared to do this?

Is it okay to tape the interview so I do not have to take notes while we are talking? I will turn it off at any time if you wish not to be recorded. I just want to remind you that, this information and you will not be identifiable and your name will not appear in the resulting report, though your comments are likely to be referred to in some form.

We have chosen to interview you because of your expertise in the area of oral language and your experience in the local area. I hope you might bring a deeper understanding to the information we have already collected. We are hoping that this study will provide further information for administrators, principals and teachers how to best provide language experiences to Prep students in local schools.

CONSENT FORM s

☐

Speech Pathologist

Survey questions:

1. What is your full role with schools in the area?
2. How many schools are within your area?
3. Do you know how many students that equates to?
4. What aged students are you working with?
5. How many Prep students do you work with in your role?
6. What programs are currently offered to either Kinder or Prep students?
7. Do you feel you have adequate resources for your role?
8. In your opinion, are these programs adequate?
9. How would you describe the major issues are you encountering when you work with either Kinder or Prep students?
10. Do you have any explanations as to why these issues are occurring?
11. Do you have any suggestions how to address these issues for the future?
12. From your perspective, do you have any other comments related to oral language, reading and writing?

Thank you for your time and input and please get in touch with me if you think of anything else you might like to add or delete from this interview.

I am happy to supply you with a copy of the Executive Summary, if you would like, when the study is complete.

APPENDIX W.

Semi-structured interview questions for the oral language teacher

Semi-structured interview questions for the Oral Language teacher

participating in:

**A study of the role of Oral Language skills in the development
of Reading and Writing in Prep students in the Tasmanian
context.**

Venue: _____ Interviewee: _____

Date: _____ Time: _____

Interview preamble:

*Hello I am Sally Rowlands and I am from the University of
Tasmania's Faculty of Education. We are collecting information
from professionals in the area on the role of Oral Language skills
in the development of Reading and Writing in Prep students.*

*I hope this interview will take between 30 – 45 minutes but it is best
to leave an hour just in case we get talking – are you prepared to
do this?*

*Is it okay to tape the interview so I do not have to take notes while
we are talking? I will turn it off at any time if you wish not to be
recorded. I just want to remind you that, this information and you
will not be identifiable and your name will not appear in the
resulting report, though your comments are likely to be referred to
in some form*

*We have chosen to interview you because of your expertise in the
area of oral language and your experience in the local area. I hope
you might bring a deeper understanding to the information we have
already collected. We are hoping that this study will provide
further information for administrators, principals and teachers how
to best provide language experiences to Prep students in local
schools.*

CONSENT FORM.

☐

Oral Language teacher

Survey questions:

1. What is your full role with schools in the area?
2. How many schools are within your area? Which schools are you currently working with?
3. Do you know how many students that equates to?
4. Do you know how many Prep students you see in your role?
5. What is involved in your program with early childhood students?
6. In your opinion, are these programs adequate?
7. Do you feel you have adequate resources for your role?
8. What issues are you encountering as you work with early childhood students?
 - a. What are the strengths you observe in current Prep students?
 - b. What are the needs you have noted in your Prep students?
9. Do you have any explanations as to why these issues are occurring?
10. Do you have any suggestions how to address these issues for the future?
11. From your perspective, can you make any other comments related to oral language, reading and writing?

Thank you for your time and input and please get in touch with me if you think of anything else you might like to add or delete from this interview.

I am happy to supply you with a copy of the Executive Summary, if you would like, when the study is complete.

APPENDIX X.

Semi-structured interview questions for the principals

Semi-structured interview questions for the Principals of schools

participating in:

**A study of the role of Oral Language skills in the development
of Reading and Writing in Prep students in the Tasmanian
context.**

School: _____ Principal: _____

Date: _____ Time: _____

Interview preamble:

Hello I am Sally Rowlands and I am from the University of Tasmania's Faculty of Education. We are collecting information from professionals in the area on the role of Oral Language skills in the development of Reading and Writing in Prep students.

I hope this interview will take between 30 – 45 minutes but it is best to leave an hour just in case we get talking – are you prepared to do this?

Is it okay to tape the interview so I do not have to take notes while we are talking? I will turn it off at any time if you wish not to be recorded. I just want to remind you that, this information and you will not be identifiable and your name will not appear in the resulting report, though your comments are likely to be referred to in some form.

We have chosen to interview you because of your expertise in the area of oral language and your experience in the local area. I hope you might bring a deeper understanding to the information we have already collected. We are hoping that this study will provide further information for administrators, principals and teachers how to best provide language experiences to Prep students in local schools.

CONSENT FORM signed

☐

Principals

Survey questions:

1. How many students are in your school?
2. How many Prep students are here?
3. How many Prep classes are here?
4. How are children sorted into the Prep classes?
5. What is involved in your program with Prep students?
6. In your opinion, are these programs successful and adequate?
7. Do you feel you have adequate resources for the prep classes?
8. Are there any issues you are encountering with these early childhood students?
 - a. What are the strengths you are aware of in your Prep students?
 - b. What are the needs you are noticing in your current Prep students?
9. Do you have any explanations as to why these issues are occurring?
10. Do you have any suggestions how your school will address these issues for the future?
11. Any other comments related to oral language, reading and writing.

Thank you for your time and input and please get in touch with me if you think of anything else you might like to add or delete from this interview.

I am happy to supply you with a copy of the executive summary, if you would like, when the study is complete.

APPENDIX Y.

Observation Schedule for preparatory teacher

observation/shadowing

Observational Schedule for Prep teacher observation/shadowing

Date: _____ Day of the week: _____

School: _____ Classroom: _____

Time of the day: _____ Type of session: _____

Length of the session observed: _____

| Characteristics | 1(low) | 2 | 3 | 4 | 5(high) |
|--|--------|---|---|---|---------|
| Opportunities for Prep listening | | | | | |
| Opportunities for Prep speaking | | | | | |
| Opportunities for Prep reading | | | | | |
| Opportunities for Prep writing | | | | | |
| Expectations for reading | | | | | |
| Expectations for writing | | | | | |
| Male - Gender expectations | | | | | |
| Female - Gender expectations | | | | | |
| Like ability groupings | | | | | |
| Cross ability groupings | | | | | |
| Availability of reading resources for 'at risk' students | | | | | |
| Availability of reading resources for 'average' students | | | | | |
| Availability of writing resources for 'at risk' students | | | | | |

| Characteristics | 1(low) | 2 | 3 | 4 | 5(high) |
|---|--------|---|---|---|---------|
| Availability of writing resources for 'average' students | | | | | |
| Availability of speaking and listening resources for 'at risk' students | | | | | |
| Availability of speaking and listening resources for 'average' students | | | | | |
| General behaviour management issues | | | | | |
| General social behaviour management issues | | | | | |

Classroom approach to learning:

Awareness of any issues related to speaking and listening:

Awareness of any issues related to reading:

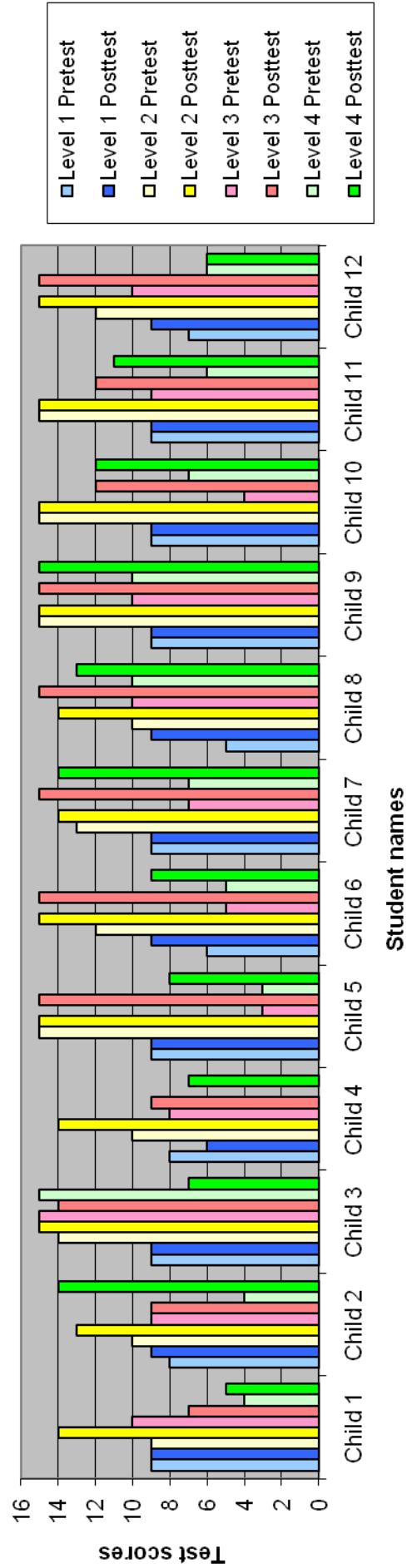
Awareness of any issues related to writing:

APPENDIX Z.

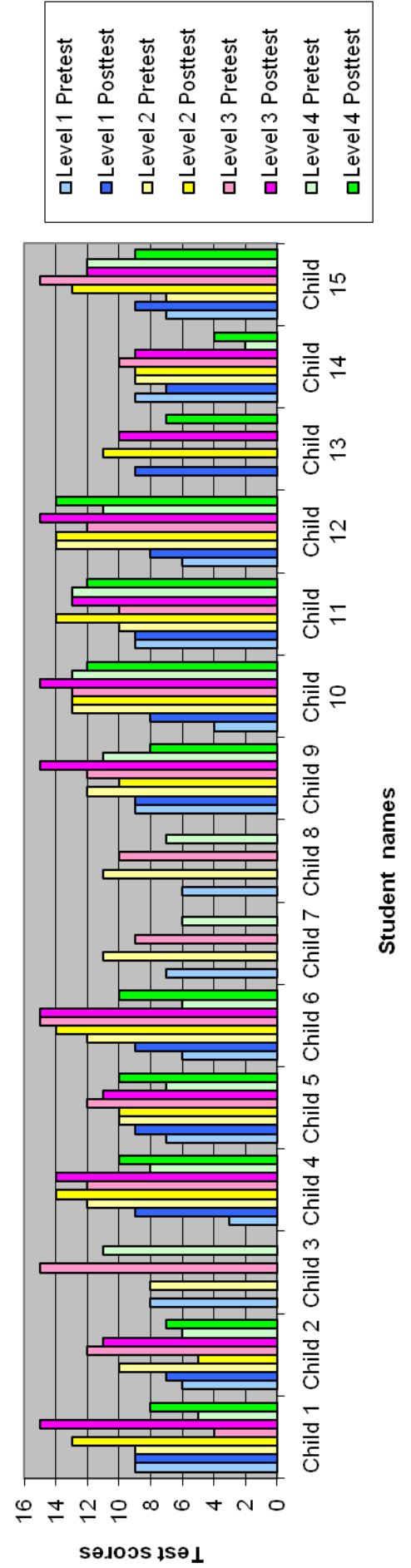
Pilot Intervention Trial 2007

Data of Student Outcomes

Kinder Trail



Prep Trial



**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix AA. Weekly Planner and ‘Blank’s Questioning’ Script
for *Rosie’s Walk* by Pat Hutchins.....pg 238

**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix BB. Weekly Planner
and 'Blank Questioning' Script for *Alexander's Outing*
by Pamela Allen.....pg 248

**The following Appendix has been removed
for copyright or proprietary reasons**

Appendix CC.pg 248

Activity Session Example for *Alexander's Outing* by Pamela Allen
.-A Puppet activity including character list, ideas for oral retell copies
of some characters at half the actual size.

APPENDIX DD.

Reading Text Level gains for ALL students

- **‘average’ and ‘at risk’ students**

Appendix DD: Reading Text Level gains of all 'students.

| INTERVENTION | Preparatory students | 'Average' students text level | | | 'At risk' students text level | | | |
|--------------|------------------------------------|-------------------------------|-------------|------------|-------------------------------|-------------|------------|---|
| | | Mid-year | End of year | Gains | Mid-year | End of year | Gains | |
| | School A Full intervention | 1 | 7 | +6 | 0 | 0 | 0 | Mean 'average' student text level gain = 4.33 |
| | | 5 | 12 | +7 | 0 | 1 | +1 | |
| | | 2 | 6 | +4 | 0 | 0 | 0 | |
| | | 2 | 5 | +3 | 0 | 0 | 0 | Mean 'at risk' student text level gain = 1.0 |
| | | 0 | 5 | +5 | 0 | 4 | +4 | |
| | | 0 | 1 | +1 | 0 | 1 | +1 | |
| | Mean scores | 1.7 1.7 | 6.0 6.0 | 4.3 4.3 | 0 0 | 0.3 1.7 | 0.3 1.7 | |
| | School B 'At risk' intervention | 1 | 10 | +9 | 0 | 5 | +5 | Mean 'average' student text level gain = 8.16 |
| | | 1 | 5 | +4 | 0 | 3 | +3 | |
| | | 1 | 7 | +6 | 0 | 1 | +1 | |
| | | 1 | 6 | +5 | 0 | 1 | +1 | Mean 'at risk' student text level gain = 2.0 |
| | | 1 | 16 | +15 | 0 | 0 | 0 | |
| | | 1 | 11 | +10 | 0 | 2 | +2 | |
| | Mean scores | 1.0 1.0 | 8.7 9.7 | 7.7 8.7 | 0 0 | 2.0 2.0 | 2 2 | |

| NON - INTERVENTION | School C 1 hour Profession Learning session | 6 | 20 | +14 | 7 | 10 | +3 | Mean 'average' student text level gain = 9.0 |
|--------------------|--|------------|--------------|-------------|------------|------------|------------|---|
| | | 2 | 18 | +16 | 0 | - | - | |
| | | 7 | 16 | +9 | 1 | 3 | +2 | |
| | | 7 | - | - | 1 | 4 | +3 | Mean 'at risk' student text level gain = 2.0 |
| | | 0 | 1 | +1 | 0 | 2 | +2 | |
| | | 1 | 6 | +5 | 0 | 0 | 0 | |
| | Mean scores | 1.0 6.5 | 8.3 18.0 | 7.3 11.5 | 2.3 0.7 | 4.0 3.5 | 1.7 2.8 | |
| | School D No Intervention | 4 | 20 | +16 | 0 | 8 | +8 | Mean 'average' student text level gain = 9.83 |
| | | 1 | 10 | +9 | 0 | 0 | 0 | |
| | | 5 | 17 | +13 | 0 | 0 | 0 | |
| | | 2 | 10 | +8 | 0 | 0 | 0 | Mean 'at risk' student text level gain = 1.33 |
| | | 2 | 10 | +8 | 0 | 0 | 0 | |
| | | 0 | 5 | +5 | 0 | 0 | 0 | |
| | Mean scores | 2.3 2.3 | 13.3 10.7 | 8.7 11.0 | 0 0 | 2.7 0 | 2.7 0 | |

KEY:

Blue = males
Pink = females

NOTE:

one 'average' and one 'at risk' student left School C

APPENDIX EE.

Writing findings of WV and HRSW tasks scores of ‘average’ and ‘at risk’ students

Table of Writing Data for ‘average’ students

| INTERVENTION | Preparatory Students | ‘Average’ students Writing Vocab | | | ‘Average’ students HRSW | | | |
|--------------|-------------------------------|----------------------------------|-------------|-------------------|-------------------------|-------------|-------------------|--|
| | | Mid-year | End of year | Gains | Mid-year | End of year | Gains | |
| | School A Full intervention | 31 | 32 | +1 | 36 | 34 | -2 | |
| | | 2 | 13 | +9 | 8 | 19 | +11 | |
| | | 33 | 31 | -2 | 34 | 35 | +1 | |
| | | 11 | 25 | +14 | 27 | 36 | +9 | |
| | | 19 | 28 | +9 | 33 | 36 | +3 | |
| | | 20 | 30 | +10 | 31 | 33 | +2 | |
| | Mean gains | 19.3 | 26.5 | +17 +24 =41 | 28.2 | 32.2 | +14 +10 =24 | |
| | School B Part intervention | 9 | 20 | +11 | 26 | 35 | +9 | |
| | | 8 | 10 | +2 | 11 | 34 | +23 | |
| | | 9 | 30 | +21 | 12 | 32 | +10 | |
| | | 3 | 37 | +34 | 24 | 30 | +6 | |
| | | 23 | 40 | +17 | 30 | 37 | +7 | |
| | | 14 | 17 | +3 | 21 | 31 | +10 | |
| | Mean gains | 11.0 | 25.7 | +16 +72 =88 | 20.6 | 33.2 | +42 +23 =65 | |

| NON - INTERVENTION | School C 1 hour Profession Learning session | 17 | 50 | +33 | 35 | 36 | +1 | |
|--------------------|--|------|------|-----------------------|------|------|---------------------|--|
| | | 24 | 40 | +16 | 25 | 37 | +12 | |
| | | 24 | 53 | +29 | 35 | 37 | +2 | |
| | | 26 | - | - | 37 | - | - | |
| | | 0 | 17 | +17 | 9 | 22 | +13 | |
| | | 7 | 27 | +20 | 16 | 33 | +17 | |
| | Mean gains | 16.3 | 37.4 | +53 +62(2) =115 | 26.2 | 33.0 | +42 +3(2) =45 | |
| | School D No Intervention | 34 | 36 | +2 | 34 | 37 | +3 | |
| | | 16 | 27 | +11 | 28 | 33 | +5 | |
| | | 36 | 32 | -4 | 36 | 37 | +1 | |
| | | 12 | 22 | +10 | 32 | 32 | 0 | |
| | | 24 | 28 | +4 | 30 | 32 | +2 | |
| | | 4 | 28 | +14 | 10 | 34 | +24 | |
| | Mean gains | 21.0 | 28.8 | +20 +17 =37 | 28.3 | 34.2 | +25 +10 =37 | |

KEY:

Blue = males
Pink = females

NOTE:

one ‘average’ **and** one ‘at risk’ student left School C

Table of Writing Data for ‘at risk’ students

| INTERVENTION | Preparatory Students | ‘At risk’ students Writing Vocab | | | ‘At risk’ students HRSW | | | |
|--------------|-------------------------------|----------------------------------|-------------|------------------|-------------------------|-------------|-------------------|--|
| | | Mid-year | End of year | Gains | Mid-year | End of year | Gains | |
| | School A Full intervention | 7 | 13 | +6 | 19 | 15 | -4 | |
| | | 3 | 7 | +4 | 3 | 11 | +8 | |
| | | 5 | 5 | 0 | 1 | 8 | +7 | |
| | | 1 | 1 | 0 | 5 | 6 | +1 | |
| | | 11 | 23 | +12 | 21 | 30 | +9 | |
| | | 1 | 5 | +4 | 2 | 6 | +4 | |
| | Mean gains | 4.7 | 9.0 | +8 +18 =26 | 8.5 | 12.7 | +13 +13 =26 | |
| | School B Part intervention | 7 | 11 | +4 | 13 | 19 | +3 | |
| | | 2 | 11 | +9 | 6 | 29 | +23 | |
| | | 4 | 5 | +1 | 2 | 3 | +1 | |
| | | 3 | 3 | 0 | 8 | 7 | -1 | |
| | | 1 | 1 | 0 | 0 | 1 | +1 | |
| | | 6 | 10 | +4 | 10 | 14 | +4 | |
| | Mean gains | 3.8 | 6.8 | +4 +14 =28 | 6.5 | 12.2 | +3 +28 =31 | |

| NON - INTERVENTION | School C 1 hour Profession Learning session | 15 | 32 | +17 | 31 | 37 | +6 | |
|--------------------|--|-----|------|-------------------|------|------|-------------------|--|
| | | 9 | - | - | 28 | - | - | |
| | | 7 | 23 | +16 | 15 | 33 | +18 | |
| | | 15 | 18 | +3 | 28 | 32 | +4 | |
| | | 3 | 10 | +7 | 4 | 27 | +23 | |
| | | 1 | 1 | 0 | 0 | 7 | +7 | |
| | Mean gains | 8.3 | 16.8 | +24 +19 =43 | 17.7 | 27.2 | +36 +22 =58 | |
| | School D No Intervention | 10 | 35 | +25 | 18 | 33 | +15 | |
| | | 2 | 2 | 0 | 3 | 3 | 0 | |
| | | 1 | 2 | +1 | 1 | 18 | +17 | |
| | | 2 | 3 | +1 | 5 | 13 | +8 | |
| | | 0 | 0 | 0 | 2 | 1 | -1 | |
| | | 1 | 2 | +1 | 2 | 7 | +5 | |
| | Mean gains | 2.7 | 7.3 | +26 +2 =28 | 5.2 | 12.5 | +31 +13 =44 | |

KEY:

Blue = males
Pink = females

NOTE:

one ‘average’ **and** one ‘at risk’ student left School C

APPENDIX FF.

Auditory Processing Data tasks scores of ‘average’ and ‘at risk’ students

Table of Auditory Processing Data for ‘average’ students.

| INTERVENTION | | ‘Average’ students: sentence sequences | | | ‘Average’ students: digit sequences | | | |
|--------------|-------------------------------|---|-------------|-------|--|-------------|-------|-----|
| | | Mid-year | End of year | Gains | Mid-year | End of year | Gains | |
| | School A Full intervention | 11 | 11 | 0 | 5 | 4 | -1 | |
| | | 10 | 9 | -1 | 4 | 4 | 0 | |
| | | 7 | 11 | +4 | 4 | 4 | 0 | |
| | | 7 | 9 | +2 | 2 | 2 | 0 | |
| | | 11 | 11 | 0 | 4 | 5 | +1 | |
| | | 7 | 8 | +1 | 2 | 4 | +2 | |
| | Mean gains | | | +6 | | | +3 | +9 |
| | School B Part intervention | 8 | 9 | +1 | 4 | 3 | -1 | |
| | | 10 | 11 | +1 | 4 | 4 | 0 | |
| | | 10 | 11 | +1 | 3 | 4 | +1 | |
| | | 7 | 9 | +2 | 3 | 2 | -1 | |
| | | 12 | 12 | 0 | 4 | 5 | +1 | |
| | | 7 | 9 | +2 | 3 | 3 | 0 | |
| | Mean gains | | | +7 | | | 0 | +7 |
| | Intervention Total | | | +13 | | | +3 | +16 |

| NON - INTERVENTION | School C 1 hour Profession Learning session | 11 | 12 | +1 | 4 | 4 | 0 | |
|--------------------|---|----|----|-----|---|---|----|-----|
| | | 6 | 12 | +6 | 2 | 4 | +2 | |
| | | 10 | 12 | +2 | 4 | 4 | 0 | |
| | | 10 | - | - | 4 | - | - | |
| | | 9 | 12 | +3 | 4 | 4 | 0 | |
| | | 10 | 12 | +2 | 2 | 4 | +2 | |
| | Mean gains | | | +14 | | | +4 | +18 |
| | School D No Intervention | 10 | 9 | -1 | 3 | 4 | +1 | |
| | | 8 | 10 | +2 | 3 | 3 | 0 | |
| | | 12 | 12 | 0 | 5 | 5 | 0 | |
| | | 11 | 11 | 0 | 4 | 4 | 0 | |
| | | 8 | 11 | +3 | 3 | 4 | +1 | |
| | | 11 | 9 | -2 | 3 | 3 | 0 | |
| | Mean gains | | | +2 | | | +2 | +4 |
| | Non-Intervention Total | | | +16 | | | +6 | +22 |

KEY:

Blue = males
Pink = females

NOTE:

one ‘average’ **and** one ‘at risk’ student
left School C

Table of Auditory Processing Data for ‘at risk’ students.

| INTERVENTION | | ‘At risk’ students: sentence sequences | | | ‘At risk’ students: digit sequences | | | |
|--------------|-------------------------------|---|-------------|-------|--|-------------|-------|-----|
| | | Mid-year | End of year | Gains | Mid-year | End of year | Gains | |
| | School A Full intervention | 8 | 9 | +1 | 2 | 3 | +1 | |
| | | 6 | 7 | +1 | 2 | 2 | 0 | |
| | | 9 | 11 | +2 | 3 | 4 | +1 | |
| | | 4 | 5 | +1 | 3 | 3 | 0 | |
| | | 8 | 10 | +2 | 3 | 4 | +1 | |
| | | 6 | 9 | +3 | 2 | 2 | 0 | |
| | Mean gains | | | +10 | | | +3 | +13 |
| | School B Part intervention | 6 | 7 | +1 | 2 | 3 | +1 | |
| | | 7 | 12 | +5 | 4 | 5 | +1 | |
| | | 0 | 4 | +4 | 2 | 3 | +1 | |
| | | 5 | 7 | +2 | 2 | 3 | +1 | |
| | | 0 | 1 | +1 | 3 | 3 | 0 | |
| | | 10 | 10 | 0 | 4 | 5 | +1 | |
| | Mean gains | | | +13 | | | +5 | +18 |
| | Intervention Total | | | +23 | | | +8 | +31 |

| NON - INTERVENTION | School C 1 hour Profession Learning session | 7 | 10 | +3 | 4 | 4 | 0 | |
|--------------------|---|----|----|-----|---|---|----|-----|
| | | 11 | - | - | 3 | - | - | |
| | | 7 | 9 | +2 | 2 | 4 | +2 | |
| | | 11 | 10 | -1 | 4 | 5 | +1 | |
| | | 7 | 8 | +1 | 2 | 3 | +1 | |
| | | 7 | 10 | +3 | 2 | 4 | +2 | |
| | Mean gains | | | +8 | | | +6 | +14 |
| | School D No Intervention | 6 | 10 | +4 | 4 | 3 | -1 | |
| | | 6 | 7 | +1 | 3 | 4 | +1 | |
| | | 6 | 7 | +1 | 2 | 3 | +1 | |
| | | 0 | 7 | +7 | 2 | 2 | 0 | |
| | | 0 | 4 | +4 | 0 | 0 | 0 | |
| | | 6 | 10 | +4 | 3 | 4 | +1 | |
| | Mean gains | | | +21 | | | +2 | +23 |
| | Non-Intervention Total | | | +29 | | | +8 | +37 |

KEY:

Blue = males
Pink = females

NOTE:

one ‘average’ **and** one ‘at risk’ student
left School C